

TOWN OF EXETER, NEW HAMPSHIRE
TOTAL NITROGEN CONTROL PLAN ANNUAL REPORT FOR 2014

1. BACKGROUND

This 2014 Total Nitrogen Control Plan Annual Report was prepared for the Town of Exeter, New Hampshire in order to comply with the requirements of AOC 13-010, Article IV.E. The AOC stipulates that the following items be addressed:

- The pounds of total nitrogen discharged from the WWTF during the previous calendar year (*refer to Section 2.1 of this annual report*).
- A description of the WWTF operational changes that were implemented during the previous calendar year (*refer to Section 2.2 of this annual report*).
- The status of the development of a total nitrogen NPS and storm water point source accounting system (*refer to Section 2.3 of this annual report*).
- The status of the development of the non-point source and storm water point source Nitrogen Control Plan (*refer to Section 2.4 of this annual report*).
- A description and accounting of the activities conducted by the Town as part of its Nitrogen Control Plan (*refer to Section 2.5 of this annual report*); and
- A description of all activities within the Town during the previous year that affect nitrogen loading to the Great Bay Estuary. The annual report shall include sufficient information such that the nitrogen loading change to the watershed associated with these activities can be quantified upon development of the non-point source/point source storm water accounting system (*refer to Section 2.6 of this annual report*).

In addition, this report is intended to support the future engineering evaluations due in September 2018 (Nitrogen Control Plan) and December 2023 (Engineering Evaluation), including: documenting total nitrogen, dissolved oxygen, *chlorophyll a* and macroalgae concentration trends in the Squamscott River and downstream waters; documenting non-point source and stormwater point source reduction trends towards allocation targets; and documenting that appropriate mechanisms are in place to ensure continued progress.

2. SUMMARY OF AOC STIPULATED ITEMS

2.1. Total Pounds of Nitrogen Discharged from the WWTF in Previous Calendar Year

Attachment 1 summarizes the total pounds and total tons of nitrogen discharged from the WWTF for the calendar year as well as the annual average total nitrogen value measured at the Squamscott River “GRBCL” sampling location, located just downstream of Newfields WWTF at Chapman’s Landing.

2.2. Operational Changes at the WWTF

The influent and effluent samplers were updated to collect flow based samples, therefore providing more representative samples to be analyzed for total nitrogen. This activity has improved the Town’s knowledge of the WWTF effluent total nitrogen discharge. There are no operational changes which can be made at a lagoon facility, such as Exeter’s, which would reduce the amount of nitrogen discharged.

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In anticipation of major operational changes at the WWTF, the Town has been engaged in two on-going planning efforts for the full calendar year. Each is summarized below:

- A Wastewater Facilities Plan has been in development. The primary purpose of this report was to identify the most cost-effective “on-site” solution for the Town. This report addresses regional wastewater treatment opportunities, including serving as a regional host facility for Stratham and/or Newfields. This report also serves as the outline and framework for the future town-wide Nitrogen Control Plan. The preliminary draft report (October 2014) was presented to a joint meeting of the Water and Sewer Advisory Committee (WSAC) and Board of Selectmen (BOS) on December 3, 2014. The October 2014 report and the presentation are posted on the Town’s website. [<http://exeternh.gov/documents>].
- Concurrent with the aforementioned facilities planning for an “on-site” solution, the Town has been working with the Town of Stratham and the City of Portsmouth to evaluate the feasibility and cost associated with conveying sewage from Exeter, Stratham, Newfields and Greenland to an expanded and upgraded Pease WWTF (i.e., approximately 5-mgd). The draft report (November 2014) was presented to a joint meeting of the Water and Sewer Advisory Committee (WSAC) and Board of Selectmen (BOS) on January 14, 2015. The November 2014 report and the presentation are posted on the Town’s website. [<http://exeternh.gov/documents>]. [*Note: The City of Portsmouth is conducting a separate study to consider a larger expansion of the Pease WWTF to 8-mgd and to 11-mgd. This study is underway and is expected to be completed in April or May 2015.*]

The Town is actively considering its next steps towards AOC compliance and is considering a “dual-track” implementation approach – one track to advance the design of an on-site WWTF and a second track to continue to consider the Pease Regional WWTF option.

2.3. Development of Total Nitrogen NPS & Stormwater Point Source Accounting

The Town has been actively participating in the Watershed Integration for Squamscott-Exeter (WISE) project along with the Towns of Stratham and Newfields as well as NHDES and EPA participants. The WISE project began in September 2013 and is scheduled to be completed in March 2015. This project addresses the Squamscott-Exeter River watershed as a whole as well as by individual Towns. The project also includes watershed assessment, pollutant load assessment (current and projected future), nitrogen control strategy identification, alternatives analysis, and stakeholder participation.

2.3.1. Nitrogen Tracking Worksheet

Over the past year, the Town generated a “Land Use Development Tracking Worksheet” to be used until the Great Bay Pollution Tracking and Accounting Pilot Program (PTAPP) implements a universal tracking tool. This form is intended for use on new development projects and remains a work in progress.

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An earlier version of this form was distributed by the Planning Department to some of the local engineering firms which routinely work with the Planning Department. A sample of this form, which has been used to summarize data from developments which began in 2014, is included as **Attachment 2**.

2.3.2. PTAPP Participation

The Town of Exeter will participate in the Great Bay Pollution Tracking and Accounting Pilot Program (PTAPP). The purpose of PTAPP is to enable coordination on nitrogen tracking and accounting for the Great Bay region. PTAPP is intended to make progress towards developing shared approaches and tools within the participant Great Bay communities. This project was initiated as an extension of a WISE tracking and accounting with the Rockingham Planning Commission and the Town of Exeter under the 604B planning grants.. Initial coordination with NHDES started in June 2014. The PTAPP program is scheduled to begin in earnest in February 2015 and be completed in December 2015. A PTAPP fact sheet and description are included as **Attachment 3**.

2.3.3. Existing Septic Systems

The WISE project completed a preliminary analysis to identify parcels with septic systems that are within 200 meters of the major streams. This work was mostly completed in 2014 and a preliminary map is included as **Attachment 4**. This work is anticipated to be completed in mid-2015.

2.4. Status of NPS and Stormwater Point Source Nitrogen Control Plan

The Wastewater Facilities Plan included one section devoted to town-wide nitrogen management (Section 4). In addition, the WISE project is expected to be completed in March 2015 and will include a draft “Integrated Plan for Nitrogen Control” for the Towns of Exeter, Stratham and Newfields. A preliminary table of contents for the draft Integrated Plan was provided by the WISE team and is included as **Attachment 5**. These documents will serve as the framework for the future Nitrogen Control Plan. The Town anticipates developing a plan of study, preliminary schedule and report table of contents for the Nitrogen Control Plan in early 2016.

During 2014, the Town began coordinating with the WISE project team, UNH and PREP regarding the scoping, budgeting and implementation of a Squamscott River water quality monitoring program. For 2015, the Town has budgeted \$32,200 and the Rockingham Planning Commission anticipates contributing approximately \$7,000 for this water quality monitoring. It appears that PREP has agreed to serve as the “fiscal agent” for the monitoring program and that this will move forward this year.

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Other Nitrogen Control Plan related activities that the Town anticipates for the upcoming year include:

- Finalize the Wastewater Facilities Plan report, the Pease Regional WWTF report and the WISE project report
- Participate in the NHDES PTAPP project
- Comply with the requirements of the NPDES MS4 General Permit once reissued.
- Continue outreach within Exeter
- Build on outreach and initiate discussions in Exeter regarding potential future updates to Stormwater and Zoning Ordinances
- Identify potential Town permit application form modifications to collect tracking data in a more efficient manner (e.g., Site Plan Review, Building Permit, etc.).
- Identify potential State permit application form modifications to collect tracking data in a more efficient manner (e.g., NHDES Application for Repair or Replacement of an Individual Sewage Disposal System).
- Continue tracking efforts by Town departments
- Continue outreach to NHDES on Great Bay watershed strategies (including fertilizer management)
- Outline strategies to engage other communities within the Exeter River watershed. *[Note: As presented in the Wastewater Facilities Plan, Exeter is the source of 33% of the delivered load to the Great Bay from the Exeter/Squamscott River watershed; conversely, the other 14 communities represent 66% of the delivered load. Achieving the targeted water quality improvements will require the cooperation and participation of all the communities within the Exeter River watershed.]*

2.5. Description and Accounting of the Activities Conducted by the Town as part of its Nitrogen Control Plan

Some of the Town's activities related to the development of the Nitrogen Control Plan are summarized on the preceding pages. Additional information is presented below.

2.5.1. Baseline Stormwater Total Nitrogen - Existing Loads

The WISE project estimated the baseline (existing) stormwater total nitrogen load for the Town of Exeter. This effort was completed based on input from EPA and NHDES using a combination of methods including SWMM and the 2014 DES report on Great Bay Nitrogen Nonpoint Source Study and revisions from watershed stakeholders. EPA and NHDES participation in the methodology development, refinement, and review has been integral to the process. The project also quantified the non-point source groundwater load from septic systems and non-septic sources (surface infiltration) as well as the point source load (from the wastewater treatment facilities) for the three Towns (Exeter, Stratham and Newfields). The results will be included in the WISE project report.

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2.5.2. **BMP Optimization and Costing for Nitrogen Management**

As part of the WISE project, a linear BMP optimization model was built to determine the least-cost mixture and load reduction effective suite of best management practices (BMPs) for implementation in the three towns. A host of scenarios ranging from integrated planning on the individual and town levels, and traditional permitting were examined. A draft final Integrated Plan will be presented to the WISE project Team and stakeholders on February 19, 2015.

2.5.3. **Water Quality Monitoring Plan**

As noted above, a draft water quality monitoring plan has been developed for the WISE communities (see **Attachment 6**) with input from the three towns, WISE, NHDES, and EPA. This Plan will be a key element to support the adaptive management. Initial sampling was conducted in 2014 at eight watershed locations and five estuarine stations. Samples were monitored for nutrients and attached algae in the summer of 2014. These stations will be monitored again in 2015. Interim results provided by the WISE Team are shown in **Attachment 7**.

2.5.4. **MS4 and AOC Checklists for the Town of Exeter**

As a part of the WISE project, two checklists were developed in late 2013/early 2014 to assist the Town with better understanding the requirements of the Administrative Order of Consent (AOC) and MS4 permit. The AOC and MS4 checklists are included as **Attachment 8** and **Attachment 9**, respectively.

2.5.5. **Stormwater Resources Binder**

A Stormwater Program Resources binder was developed which contains information with regards to the 2003 MS4 Permit, the Town of Exeter's progress towards meeting the 2003 permit requirements, the draft 2013 MS4 Permit, a set of drainage infrastructure maps and drainage area analyses (which can be used for the IDDE requirements proposed in the 2013 Draft MS4 permit), and other resources that were of interest to Exeter based on input from Town Personnel.

2.6. Description of Activities Conducted which Affect Nitrogen in the Great Bay Estuary

Numerous activities were conducted in Town which affect nitrogen in the Great Bay Estuary. The activities are described below and are organized by municipal department.

2.6.1. Coordination between Departments

As noted above, the Town is required to develop a total nitrogen tracking and accounting system as a part of the AOC. There are three departments that are responsible for managing, monitoring and/or approving activities which impact the total nitrogen load – either increasing or decreasing – to the Great Bay Estuary. The Planning Department is primarily responsible for new developments (e.g., buildings, private roads, etc.), the Building Department is primarily responsible for monitoring the status of construction of development (e.g., housing, commercial, etc.) and the Public Works Department is primarily responsible for public infrastructure (e.g., WWTF, public roads, sewers, storm

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drains, etc.). Over the past year, the Town has made progress in identifying areas of responsibility for the two departments and in identifying coordination procedures between departments. The table below summarizes the results of the initial discussions regarding the responsibility for tracking.

Status of “Primary Areas of Responsibility Tracking”

Public Works Department	Planning and Building Departments
WWTF activities and upgrades	New and modified septic systems
Changes in Infiltration/Inflow	New and modified private WWTFs
Changes in impervious cover (public)	New connections to the sewer system
Changes in stormwater BMPs (public)	Changes in stormwater BMPs (private)
Changes in turf management (public)	Changes in turf management (private)
Changes in ordinances (e.g., stormwater)	Changes in ordinances (e.g., zoning)
Maintenance and mapping of infrastructure	Conversion of existing landscape
Facilities Planning	Changes in impervious cover (development)

2.6.2. Planning and Building Departments

Over the past year, the Building Department issued 674 building permits, as summarized in the table below.

Building Permits Issued in 2014

Building Permits Issued	Number
January	49
February	52
March	52
April	41
May	54
June	57
July	84
August	79
September	83
October	65
November	9
December	49
Total	674

Of these building permits, a total of 23 parcels had development/re-development which impacted total nitrogen. In summary, these parcels resulted in approximately 68,480 square feet of new impervious area, 2 new septic systems, 2 rebuilt septic systems and 8 new sewer connections. The Preliminary Nitrogen Tracking Summary is presented as **Attachment 10**. In addition, the Planning Department initiated efforts to map all the private stormwater BMPs in town. Pending funding, this mapping will be incorporated in the GIS system.

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2.6.3. Public Works Department

The Public Works Department has conducted a significant number of activities in 2014 which have affected nitrogen in Great Bay, including capital improvements, best management practices, training activities, outreach activities and planning efforts. These are summarized below.

- One new “pet waste station” (bags and disposal containers) was installed at the intersection of Linden Street and Deep Meadow Drive. Other pet waste stations are located in the “downtown to train station” walking loop as well as other areas of concern such as the Town Forest parking lot, dog walking area adjacent to Squamscott River, Gilman Park adjacent to Exeter River, waterfront park adjacent to Squamscott River, Holland Way adjacent to Dearborn Brook and recent area noted as needing a disposal station adjacent to Wheelwright Creek.
- Rain barrels were available for residents to purchase (22 sold in 2014).
- Continued outreach and education through the following efforts (**Attachment 11**):
 - “Think Blue Exeter” program website
 - “Runoff Returns” informative pamphlets.
 - “Exeter Wellhead Protection Program” pamphlets.
 - “Septic Smart” program informative display in town offices and pamphlets.
- Continued street sweeping and catch basin cleaning programs. A total of 780 catch basins were cleaned in 2014.
- A tablet computer was purchased and used to document stormwater management inspections and facilitate mapping updates. The inspections are entered in real-time to People GIS and allow for photos to be assigned as an attribute.
- Stormwater Best Management Practice inspections were performed at several private developments with deficiencies identified. Maintenance Agreement “report cards” were issued to the following properties.
 - Linden Commons
 - Exeter Commons
 - Sewall Property at 149 Epping Road
 - Hampton Inn
 - Beech Hill Estates Subdivision
 - Wright Lane Subdivision
- Approximately 4,000 linear feet of stormwater collection piping in the Locust Street/Forrest Street neighborhood were cleaned and inspected via CCTV camera.
- Continued IDDE efforts through the use of canine investigations in the Locust Street/Forrest Street neighborhood. A final report summarizing the findings of the investigation will be delivered in early 2015.
- Stormwater drainage area watershed delineation/mapping was completed for the Town by Geosyntec in 2014 to support future AOC and MS4 requirements through the on-going CAPE (“Climate Adaptation Plan for Exeter”) project. The series of maps and associated tables were developed of the Town of Exeter’s drainage infrastructure including outfalls, drainage pipes, pipe type, pipe diameter, manholes, catch basins and associated drainage areas for the outfalls.

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- Stormwater Management flooding areas of concern were identified in a memorandum to the Town by Geosyntec in January 2015. The technical memorandum included a summary of areas of concern and a ranking of severity based on depth and duration of flooding. Concept level recommendations on potential options or strategies to mitigate flooding in areas ranked as severe were provided in the memorandum.
- Approximately 2,800 linear feet of vitrified clay sewer was replaced on Portsmouth Avenue, which was a known source of infiltration.
- Continued infiltration/inflow investigations, including manhole inspections, smoke testing, building inspections and flow evaluations. The following issues were found and fixed. The sources were contributed over 8 to 10 million gallons of water to the WWTF, which in turn was “polluted with nitrogen” at the WWTF. These efforts removed nitrogen from the WWTF effluent discharge.
 - A catch basin was discovered to be tied into the sewer collection system, which was immediately disconnected. It was estimated that this connection contributed 4 to 6 million gallons per year and 2 million gallons per day peak hour flow during intense rainfall events.
 - A drain pipe that discharged to the tidal portion of the Squamscott River was found to be connected to the sewer collection system. It was estimated that 3 to 4 million gallons a day peak flow rate into the sewer during extreme high tide events from this connection. The connection was immediately disconnected from the sewer system.
 - 17 sump pumps and 2 yard drains were discovered to be discharging directly into the sewer collection system from the Phillips Exeter Academy campus. These items are in the process of being redirected to the stormwater collection system and follow up inspections are required to verify disconnection.
- Seven public works and utility personnel completed an educational class on how to properly deal with asbestos pipe during construction and excavation activities.
- Eight public works personnel completed an educational class through the UNH T2 School Road Scholar Program on culvert Maintenance.
- The Town Engineer and Highway Superintendent completed the UNH Stormwater Symposium on permeable pavers.
- The Town Engineer attended a workshop on surface gravel wetland systems.
- All snow plow drivers received their “Green Pro Snow Certification”.
- Stormwater Prevention Plan Spill Kits were purchased for the Public Works Department and distributed throughout the facilities.
- Each Town resident was permitted to have ten bags of leaves picked up for free in the fall 2014. The leaves were distributed to a compost pile and residents are allowed to use the compost.
- A downtown sidewalk replacement project (Water Street) is in the planning process and is targeting construction in 2015 (pending funding). The downtown area has a high percentage of impervious area. This project may include “tree wells” and “bumpouts” as a stormwater best management practice (BMP) design elements and nitrogen removal pilot project. If funded, the improvements could be modeled to estimate the nitrogen load reductions for these BMPs.

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- Continued planning on the Great Dam removal. The Great Dam removal citizen's petition warrant article was approved in March 2014 in the amount of \$1,786,758. This warrant finances the removal efforts of the Great Dam. In August 2014, a contract was signed with Vannase, Hangen Brustlin (VHB) to design, permit, coordinate cultural resource reviews and bid the project. Surveys and geotechnical investigations were performed in September. Section 106 consultations were performed and 30% design plans were submitted to the town for review in December.

LIST OF ATTACHMENTS

- Attachment 1: WWTF Effluent Total Nitrogen Annual Load Table
- Attachment 2: Land Use Development Worksheet
- Attachment 3: PTAPP Fact Sheet and Full Description
- Attachment 4: Town of Exeter Septic System Map
- Attachment 5: Table of Contents for Draft Integrated Plan for Nitrogen Control
- Attachment 6: Draft WISE Monitoring Plan
- Attachment 7: Draft Interim Monitoring Results 11/06/2014
- Attachment 8: Administrative Order on Consent (AOC) Checklist
- Attachment 9: Draft NH Small MS4 General Permit Checklist
- Attachment 10: Preliminary Nitrogen Tracking Summary Table
- Attachment 11: Town of Exeter Public Outreach Pamphlets

ATTACHMENT 1 - EXETER, NH - TOTAL ANNUAL NITROGEN LOAD TO SQUAMSCOTT RIVER

ATTACHMENT 1 - EXETER, NH - TOTAL ANNUAL NITROGEN LOAD TO SQUAMSCOTT RIVER															GRBCL
WWTF EFFLUENT - TOTAL ANNUAL NITROGEN LOAD															Squamscott R.
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Load	Load	TN Conc.
	(lbs/mn)	(lbs/yr)	(tons/yr)	(mg/l)											
Days per month	31	28	31	30	31	30	31	31	30	31	30	31			
Past Years															
2003-2008	-	-	-	-	-	-	-	-	-	-	-	-	85,400	42.69	0.77
2009-2011	-	-	-	-	-	-	-	-	-	-	-	-	83,600	41.80	0.71
2012	8,457	7,830	9,303	8,151	11,590	7,633	4,338	2,235	2,312	6,349	6,222	11,745	86,164	43.08	0.83
2013	10,700	9,082	13,913	8,681	9,029	12,500	10,852	7,165	3,971	5,203	8,611	11,270	110,976	55.49	0.82
2014	10,198	8,321	9,439	6,754	6,643	6,803	6,680	8,014	4,565	5,037	10,906	12,981	96,342	48.17	-

Previous Year (2012)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Monthly Avg Flow (mgd)	1.92	1.69	1.91	1.56	1.84	1.94	1.27	1.30	1.26	1.45	1.38	1.75	-	-
Avg TN Conc. on Sample Day (mg/l)	18.3	20.8	19.9	21.0	24.4	16.3	17.9	7.5	8.5	17.1	19.3	27.5	-	-
Avg TN Load on Sample Day (lb/d)	253	266	283	270	374	245	154	63	65	202	192	355		
Load - Flow Basis	9,071	8,212	9,833	8,201	11,586	7,917	3,903	2,516	2,674	6,436	6,684	12,484		
Load - Load Basis	7,843	7,448	8,773	8,100	11,594	7,350	4,774	1,953	1,950	6,262	5,760	11,005		
Load - Average	8,457	7,830	9,303	8,151	11,590	7,633	4,338	2,235	2,312	6,349	6,222	11,745	86,164	43.08

Previous Year (2013)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Monthly Avg Flow (mgd)	1.71	1.67	2.56	1.95	1.63	2.17	1.75	1.29	1.53	1.22	1.25	1.45	-	-
Avg TN Conc. on Sample Day (mg/l)	24.2	23.3	21.0	18.5	21.8	23.1	24.2	21.9	10.5	16.9	25.0	31.8	-	-
Avg TN Load on Sample Day (lb/d)	345	324	449	278	286	415	347	226	131	164	313	342		
Load - Flow Basis	10,705	9,092	13,907	9,022	9,192	12,549	10,947	7,323	4,012	5,321	7,832	11,938		
Load - Load Basis	10,695	9,072	13,919	8,340	8,866	12,450	10,757	7,006	3,930	5,084	9,390	10,602		
Load - Average	10,700	9,082	13,913	8,681	9,029	12,500	10,852	7,165	3,971	5,203	8,611	11,270	110,976	55.49

Current Year (2014)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Monthly Avg Flow (mgd)	1.82	1.66	1.98	2.73	1.72	1.26	1.33	1.28	1.12	1.36	1.42	1.5	-	-
Avg TN Conc. on Sample Day (mg/l)	23.5	24.5	21.0	9.8	15.3	20.5	19.1	25.0	16.3	18.5	30.3	26.4	-	-
Avg TN Load on Sample Day (lb/d)	301	255	262	227	209	238	219	250	152	115	368	507		
Load - Flow Basis	11,064	9,503	10,757	6,698	6,808	6,467	6,572	8,278	4,570	6,509	10,772	10,244		
Load - Load Basis	9,331	7,140	8,122	6,810	6,479	7,140	6,789	7,750	4,560	3,565	11,040	15,717		
Load - Average	10,198	8,321	9,439	6,754	6,643	6,803	6,680	8,014	4,565	5,037	10,906	12,981	96,342	48.17

NOTES:

1. Blue font indicates data from grab samples, TN estimated based on NH3-N plus 2 mg/l for effluent Organic Nitrogen.
2. Green font indicates data from grab samples, TN measured directly.
3. Red font indicates data from effluent composite sampler, TN measured directly.
4. Per the 2009 NHDES document, "Numeric Nutrient Criteria for the Great Bay Estuary," for days with multiple samples, the highest Squamscott River TN value was utilized.
5. Sample location is identified as GRBCL, located just downstream of the Newfields Wastewater Treatment Facility.
6. 2014 Squamscott River Data is not available at this time.

SOURCES:

1. 2003-2011 WWTF TN Loading values are from the 2012 Environmental Data Report (PREP).
2. The Squamscott River TN Concentration values are derived from the UNH Jackson Estuarine Laboratory Tidal Water Quality Monitoring Program.

Town of Exeter, NH
Land Use Development Tracking Worksheet



Map / Lot No. 024-005-0000		Zoning District RU		Project Name		Exeter File No. 44 CAPTAINS WAY	
Planning Board #		Approval Date		Occupancy Date 7/14/14		Source Reference Material BUILDING FILE / GIS	
Within Shoreland Protection No		Name of Water Body		Distance from Water (Ft)		Buffer Size (SF)	
Land To (SF)	Turf / Grass 5440	New Impervious 6450	Imp. Removed	Disconnected Imp.	Agr. / Pasture		
Previous	WOODS	WOODS					
Soil Type							
Percent Disconnected		0%					
Infiltration Rate							
Description of soil / landscape restoration							
Estimated annual runoff							
Type of Agricultural / Pasture use							
Wetland areas filled (SF)				Wetland areas restored (SF)			
Sewer Connection No		Septic System Type CONVENTIONAL		Design Flow (Gal) 450		Maintenance Required and Frequency INSPECT / PUMP EVERY 3 YEARS	
New / Rebuilt NEW		Name of closest Water Body to Septic System ROCKY HILL BROOK			Distance to closest Water Body (Ft or Mi) 1690 FE		
BMP No.	BMP Type	BMP Description	GPS Coordinates		Drainage Area (SF)	Design Storm (in)	
			Latitude	Longitude			
BMP No.	Water Quality Volume (CF)	Percent Runoff Volume Reduction	Disconnection Multiplier	Effective Impervious (SF)	Underdrained		
BMP No.	Description of required maintenance and scheduled frequency						
BMP No.	Annual N Load to BMP (lbs N/Yr)	N Removal Efficiency (%)	N Load Reduction (lbs N/Yr)	Cumulative N Load Reduction (lbs N/Yr)			
Parcel Existing Annual N Load (lbs N/Yr)			Total Parcel N Load Reduction (lbs N/Yr)		Parcel Proposed Annual N Load (lbs N/Yr)		

Great Bay Pollution Tracking and Accounting Pilot Project (PTAPP)

What is PTAPP?

The Great Bay estuary exhibits symptoms of pollution: low dissolved oxygen in tidal rivers, increased macroalgae, and declining eelgrass. Most pollution originates from sources spread across the watershed including septic systems, fertilizers and air pollution. Stormwater runoff from developed areas is a major pathway for pollutants.

Watershed communities are facing regulatory measures to improve water quality in Great Bay and its tributaries. These requirements include implementation and tracking of pollution control activities; however, tracking and quantifying project success is challenging and expensive. Communities agree that regional coordination is needed to leverage scarce financial resources and develop a consistent, effective tracking system.



Aerial View of Great Bay

The PTAPP is a cooperative forum for communities to work toward identifying key components, needs, and next steps for successful implementation of a consistent regional system. Goals include progress toward development of: 1.) a **Tracking Tool** to track activities that affect pollutant loads, and 2.) an **Accounting System** to credit activities and estimate pollutant load reductions.

PTAPP Process, Outcomes and Benefits

The PTAPP **process** includes six facilitated workgroup meetings held over the course of one year beginning in February 2015. During meetings, participants will develop a shared agreement and understanding of principal technical components, resource needs, and next steps for regional tracking and accounting. Each meeting will have an identified goal and outcome and will build on results from similar efforts such as those conducted in Chesapeake Bay and Long Island Sound. The PTAPP process will ultimately result in an Implementation Framework describing system recommendations and next steps for implementation including approach, roles, resources, and timeline. **Summary of anticipated PTAPP outcomes :**

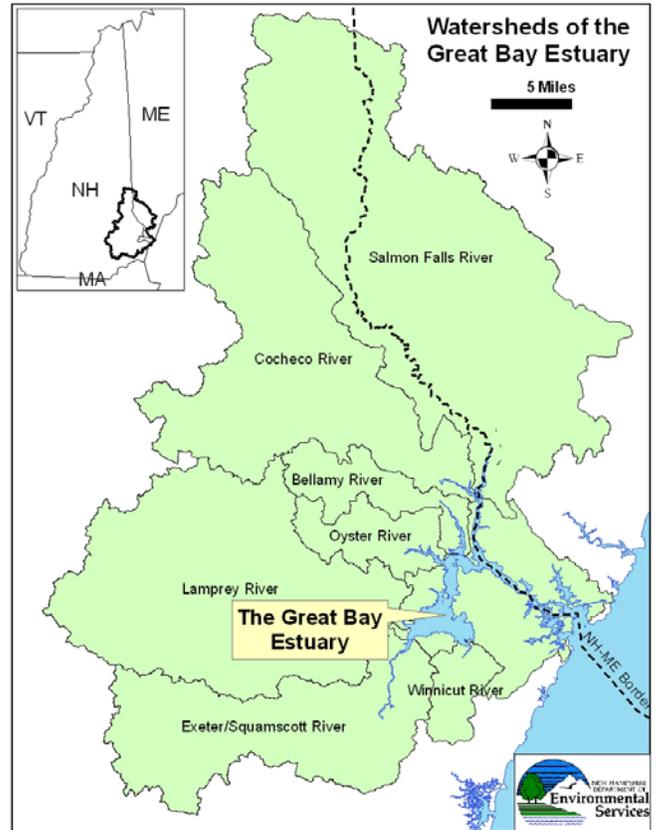


This bioretention unit is an example of a stormwater management activity that would be tracked and credited.

- Progress toward regional agreement is achieved.
- Additional needs are identified (funding, technology, etc.).
- Roles and responsibilities are described.
- Implementation Framework is created.

Municipalities in the Great Bay region seek to create a regional tracking system that is economical, easy to implement, and meets regulatory needs. PTAPP **benefits** include the following:

- **Economic:** Financial resources are leveraged at the regional level so that municipalities do not shoulder costs individually.
- **Regulatory:** A consistent regional accounting system and tracking tool will help meet municipal permit requirements.
- **Social:** Regional coordination promotes common understanding of needs and identifies opportunities for collaboration and resource-sharing.
- **Environmental:** Regional pollution management and tracking will likely result in measurable water quality improvement over time.



PTAPP focus area

Who is participating?

Participants include representatives from municipalities in the Great Bay estuary region, consultants, state and federal agencies, regional planning commissions, watershed planning groups, regulators, and other interested attendees.

The NH Department of Environmental Services and the University of New Hampshire Stormwater Center will provide leadership and facilitation for the process.

Participants are encouraged to make the process “their own” and will be provided opportunities for input into meeting agendas, content, and outcomes.

PTAPP Schedule

The PTAPP process includes six workgroup style meetings held over the course of one year. Each meeting has a target outcome to build progress toward completion of the Implementation Framework.

Anticipated Project Schedule

Expected Date	Major Task	Target Outcome
February 2015	Meeting 1: Tracking Criteria	Draft tracking criteria
March 2015	Meeting 2: Accounting Credits	Draft accounting credits
April 2015	Meeting 3: Accounting System - Criteria and Credits	Accounting System recommendations
May 2015	Meeting 4: Define Tracking Tool	Conceptual Tracking Tool developed
June 2015	Meeting 5: Tracking Tool (continued)	Tracking Tool recommendations
September 2015	Meeting 6: Implementation Framework	Key components identified
October 2015	Draft Implementation Framework review	Participants finalize framework
December 2015	Final Implementation Framework released	Implementation of next steps begins

Important Note: PTAPP is a pilot project with limited resources and timeframes; therefore, realistic expectations for the project schedule and outcomes will be maintained during the project.

Project Contacts:

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Great Bay Pollution Tracking and Accounting Pilot Program (PTAPP) Project Description

October 2, 2014

Background

The Great Bay estuary exhibits many of the classic symptoms of too much nitrogen: low dissolved oxygen in tidal rivers, increased macroalgae growth, and declining eelgrass (PREP, 2013, DES, 2014). The majority of nitrogen in the bay originates from sources of pollution spread across the watershed rather than municipal wastewater treatment facilities. These sources of pollution are called non-point sources of pollution (NPS) and consist of septic systems, fertilizers and air pollution (PREP, 2013, DES, 2014). Stormwater from impervious cover (IC), such as roads and parking lots, is a major pathway for NPS pollutants.

Due to declining water quality in Great Bay and other waterbodies, Great Bay watershed communities currently face regulatory requirements to improve water quality such as Administrative Orders of Consent and MS4 stormwater permits. These requirements necessitate tracking of NPS control projects designed to mitigate and reduce pollutants entering Great Bay and accounting for the pollutant load reductions achieved, including nitrogen.

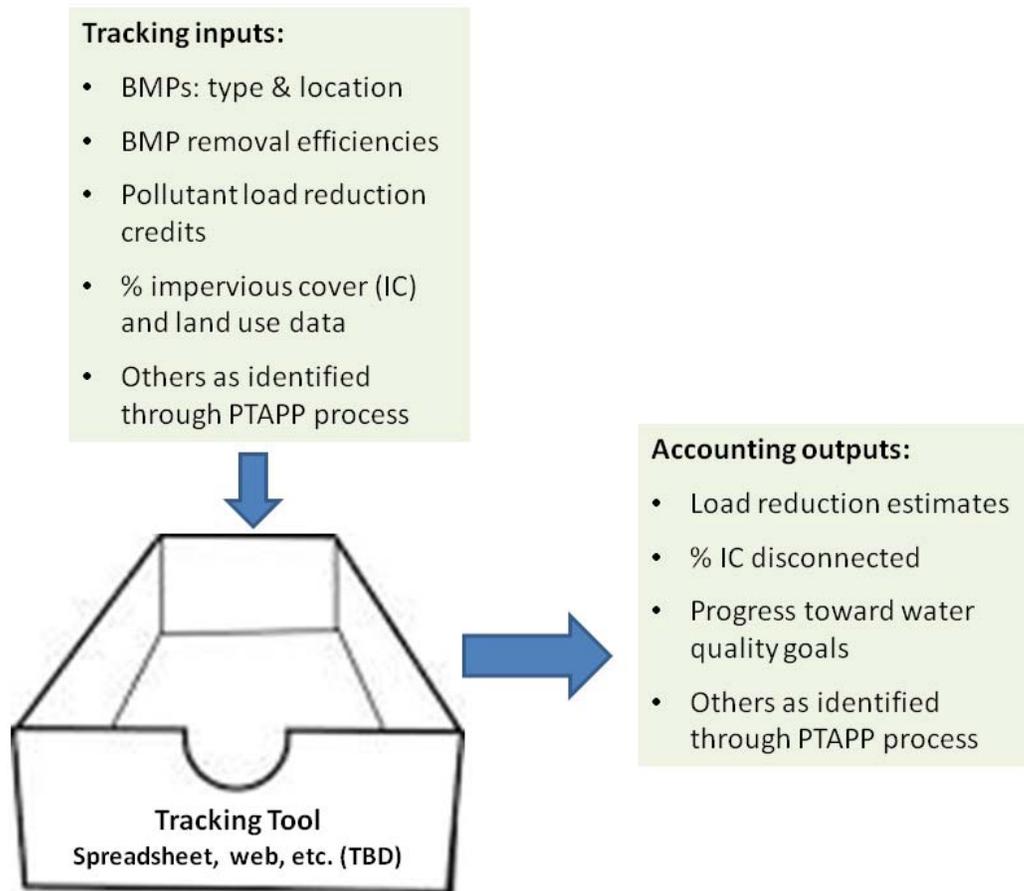
Tracking and accounting for pollutant load reductions achieved through various NPS control projects is challenging. Some communities have initiated steps to develop tracking systems; however, regional consensus has not been reached on accounting or tracking methods. Communities in the region agree that regional coordination on tracking and accounting is needed and would be beneficial; however, implementation resources are limited.

This project will result in the creation of an accounting system and tracking tool that will enable municipalities to perform a quantitative assessment of pollutant load reductions associated with nonpoint source management activities in the Great Bay region.

Project Purpose and Goals

The purpose of the Great Bay Pollution Tracking and Accounting Pilot Program (PTAPP) is to enable regional coordination on nitrogen tracking and accounting for the Great Bay region (and possibly other pollutants). Great Bay region communities will save money and time by leveraging resources to develop shared approaches and tools. Specifically, the project will make progress toward the following goals: 1.) Creation of a **Tracking Tool** to track implementation of structural and non-structural Best Management Practices (BMPs); and 2.) Development of a regional **Accounting System** to account, credit, and track estimated pollutant load reductions achieved through BMP implementation. (Figure 1.)

Figure 1. Conceptual Diagram: Regional Accounting System and Tracking Tool



Anticipated Outcomes and Benefits

Municipalities seek an accounting system and tracking tool that will be simple, economical, easy to implement, and meet regulatory needs. The PTAPP process will provide the foundation for development of a regional tracking tool and accounting system.

Anticipated PTAPP outcomes include:

- Tracking tool development
- Consensus on and adoption of a regional accounting system
- Clear identification of additional needs (funding, technology, etc.)
- Identified roles and responsibilities for next steps
- Implementation framework and timeline

Note: PTAPP is a pilot project operating with limited financial resources, timeframes, and available effort; therefore, maintaining realistic and practical expectations for project outcomes is important. Table 1 provides an overview of estimated outcomes under three project scenarios.

Table 1. Range of PTAPP Outcomes

Optimistic	Realistic	Pessimistic
Type of BMPs, tracked pollutants, and pollution credits are agreed upon (accounting system); tracking tool is developed; regulatory authorities approve the regional approach. <i>Outcome:</i> Implementation of a regional accounting and tracking system.	Recommendations developed for tracking and accounting system: <ul style="list-style-type: none"> • Types of BMPs • Pollutants to be tracked • Pollutant load reduction credits for BMPs • Tracking tool • Conceptual frame work. <i>Outcome:</i> A second phase of PTAPP is implemented.	Consensus on how to move forward is not reached. <i>Outcome:</i> Project is terminated.

Project Benefits:

- Regulatory: Progress toward development of a consistent accounting system and tracking tool for use in municipal discharge permits.
- Economic: Resources for accounting system and tracking tool development are leveraged at the regional level.
- Social: Regional coordination promotes common understanding of needs, outcomes, benefits, and identifies opportunities for collaboration.
- Environmental: Improved regional nitrogen and pollutant planning; quantitative evaluation of pollutant load reduction.

PTAPP Participants – Roles, Responsibilities, Level of Effort

The PTAPP process will include a series of work group meetings held over the course of a year. The meetings will build toward regional consensus on accounting system and tracking tool development. Meetings will be structured to provide outcomes that define next steps and follow-up actions.

The PTAPP work group process will consist of:

- Six meetings held over one year;

- Three of the six meetings will be larger, broader content meetings that will include participation from an Administrative Work Group (see description below);
- Meetings will be structured to result in defined follow-up actions, and
- Meeting results will be used to develop recommendations and final documentation of outcomes.

A range of participants and levels of participation are anticipated. PTAPP meetings will include a collaborative, work-group style approach led by NH DES and a Technical Facilitator (UNH Stormwater Center) over the course of a year. Participants in the process would include municipalities, agencies, regional planning commissions, and consultants (Table 2.). PTAPP will be a “flat” process, where all participants contribute equally to the process regardless of project role or level of participation.

Process Leaders and Management:

- **Lead Project Facilitator – NH DES:** Provides overall project leadership and management; communicates project progress to all participants, and assists with meeting facilitation.
- **Technical Facilitator - UNH Stormwater Center (UNHSC):** Facilitates workgroup meetings. Provides technical knowledge of the science, issues, region, and resources; facilitates meetings and develops project documentation.

Process Participation (two levels anticipated):

- **Technical Work Group (TWG):** Participates in all PTAPP meetings; provides technical and scientific input for all aspects of the project (municipal consultants, agency representatives, town staff, regional planning commission staff).
- **Administrative Work Group (AWG):** A subset of self-selected participants; this group is structured to encourage participation from town administrators, municipal board members, or others who would like to participate, but may not have the time or expertise to participate in every work group meeting. Therefore, three meetings will be structured to incorporate broader, administrative input from these attendees.

A general description of anticipated PTAPP participants and their roles is presented in Table 2.

Table 2. Participant Descriptions, Roles, Responsibilities and Level of Effort

Participant Description	Role	Responsibilities	Level of Effort
Municipal Representatives (invited): Durham, Exeter, Newmarket, and Stratham	Provide technical expertise and/or broader administrative expertise; offer input on local needs	Attend meetings (TWG and/or AWG) and provide technical and administrative input	Medium to High (depends on level of work group involvement; assumes that some town staff would participate in the Administrative Work Group only.)
Municipal Consultants: TBD by town	Provide technical expertise and local knowledge	Attend all work group meetings; provide technical and scientific input	High
WISE – Integrated Planning for the Squamscott Exeter: Represented by GeoSyntec	Provide technical expertise and local knowledge of integrated watershed planning/permitting	Attend all work group meetings; provide technical and scientific input.	High
Rockingham Planning Commission	Provide land use planning technical expertise and local knowledge; administer subcontracts to SRPC, participating member towns & WISE	Attend all work group meetings; provide technical and scientific input.	High
Strafford Regional Planning Commission	Provide land use planning technical expertise and local knowledge; administer subcontracts to participating member towns	Attend all work group meetings; provide technical and scientific input.	High
NH DES	Provides overall project management; helps facilitate meetings, acts as liaison.	Attends all work group meetings and provide project management, facilitation, communicates project progress, and provides technical input.	High
UNHSC	Technical Facilitator for the work group process	Facilitates work group meetings; conducts background research, develops agendas and products (with participant input); communicates results.	High
US EPA	Provides technical, scientific, and regulatory expertise	Attend work group meetings	Medium to High
GBNERR	Provide technical and scientific expertise	Attend work group meetings	Medium to High
Southeast Watershed Alliance	Provide regional perspective and expertise	Attend work group meetings	Medium to High

PTAPP Process

The process will consist of six work group meetings held over the course of a year. Each meeting will have a defined outcome. Follow-up actions and/or “homework” to be completed will also be identified and assigned to the appropriate leaders and participants. All participants will have input into meeting agendas and content.

Note: Examples from other efforts such as the Long Island Sound Study Tracking Tool development project, Chesapeake Bay, and others will be researched and utilized during meetings to help guide the process.

A description of meetings and anticipated outcomes are as follows. A project schedule with deliverables and anticipated outputs is presented in Table 3.

Meeting 1. Accounting System: Criteria – what’s being tracked and when do we start?

Objective: Develop list of potential accounting criteria (BMPs, pollutants, IC, other items); discuss what will be tracked and when we should start tracking (base year).

Outcome: Draft criteria and base year for tracking are developed.

Attendees: TWG

Follow-up Action: UNH Stormwater Center with input from TWG researches accounting system credit values for the criteria. A draft of credit values is sent to participants for review prior to Meeting 3.

Meeting 2. Accounting System: Credits –what’s it worth?

Objective: Review draft credit values for pollutant load reduction actions and agree on baseline conditions, load reduction credits, and additions from land conversion or other pollutant sources.

Outcome: Draft credits are developed.

Attendees: TWG

Follow-up Action: With input from the TWG, UNHSC will prepare a technical memo describing load reduction and criteria credits.

Meeting 3: Accounting System: Criteria and Credits Overview

Objective: Discuss and finalize accounting system base year, credits, and criteria.

Outcome: Draft (or final) accounting system credits and criteria.

Attendees: TWG & AWG

Follow-up Action: In preparation for meeting 4, UNHSC will research existing tracking tools and will prepare ~3 conceptual tracking scenarios (spreadsheet, web-based, etc.) for review during meeting 4.

Meeting 4: Tracking Tool: Defining the Tool

Objective: Tracking Tool scenarios are reviewed and discussed (pros, cons, barriers, needs, etc.).

Outcome: Conceptual tracking tool is identified.

Attendees: TWG

Follow-up Actions: UNHSC with input from the TWG will prepare a “next steps” document outlining what needs to be done to develop the tracking tool (including, additional needs, roles, timeline, & potential funding needs).

Meeting 5: Tracking Tool: Further Development and Next Steps Planning

Objective: Draft conceptual tracking tool is presented and discussed by group.

Outcome: Final recommendation for tracking tool.

Attendees: TWG & AWG

Follow-up Actions: With TWG & AWG input, UNHSC will prepare a “next steps” document outlining what needs to be done to implement the accounting and tracking system (including, roles, timeline, & potential funding needs).

Meeting 6: Implementation Framework

Objective: Review “next steps” document and develop an Implementation Framework.

Outcome: Implementation Framework is developed and next steps are mapped out.

Attendees: TWG & AWG

Follow-up Actions: UNHSC with input from TWG & AWG prepares final Implementation Framework and distributes to group.

Table 3. Deliverables, Schedule, Outcomes and Outputs

PTAPP Task	Deliverables	Dates	Process Outcome	Project Outcome
Development of a pollution accounting and tracking system for the Great Bay region.	Project contracting and start-up	Late fall 2014 – early winter 2015	Contracts with participants approved; background research started	Creation of a system and tool that will enable quantitative assessment of pollutant load reductions associated with nonpoint source management activities in the Great Bay region.
	Meeting 1: Criteria	February 2015	Draft criteria	
	Meeting 2: Credits	March 2015	Draft credits	
	Meeting 3: Accounting System	April 2015	Accounting System recommendations	
	Meeting 4: Define Tracking Tool	May 2015	Conceptual tracking tool identified	
	Meeting 5: Tracking Tool Development	June 2015	Final tracking tool recommendation	
	Meeting 6: Implementation Framework	September 2015	Draft framework developed	
	Implementation Framework	Late fall 2015	Framework to guide implementation and/or next steps for a regional tracking tool.	

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Sources: Esri, DigitalGlobe, GeoEye, iSatellite, USDA, USGS, AEX, Geomatics, AeroGRID, IGN, iCPI, swisstopo, and the GIS User Community

Legend

-  Septic within 200 meter buffer
-  Watershed Boundary
-  Hydrology
-  Parcel Boundaries

Layer/Data Sources:
 New Hampshire Dept.
 of Environmental Services;
 Rockingham Planning Commission;
 National Hydrography Dataset;
 Town of Exeter

NOTE:
 Future work may include
 data on septic system ages



INTEGRATED WATERSHED PLAN FOR THE SQUAMSCOTT-EXETER RIVER

PRELIMINARY DRAFT

Prepared for

Towns of Exeter, Stratham, and Newfields, New Hampshire

The Science Collaborative of the National Estuarine Research Reserve (NERR)

January 23, 2015

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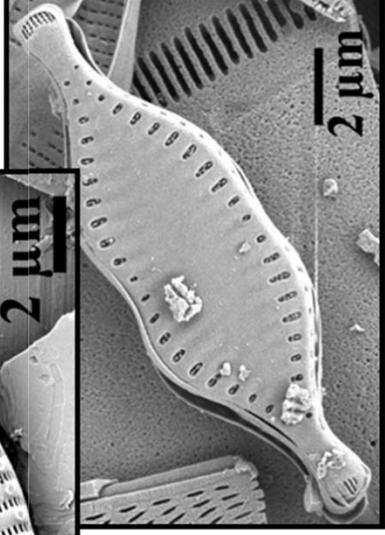
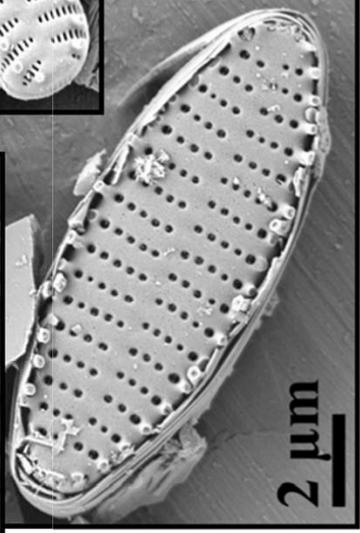
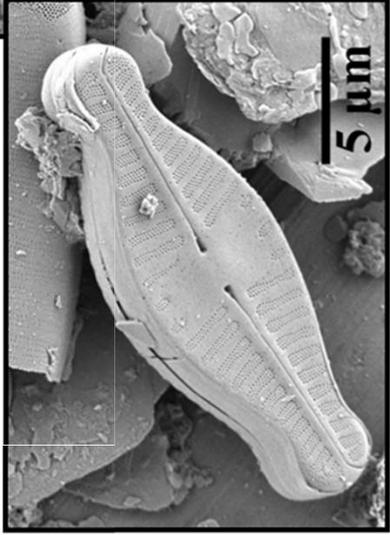
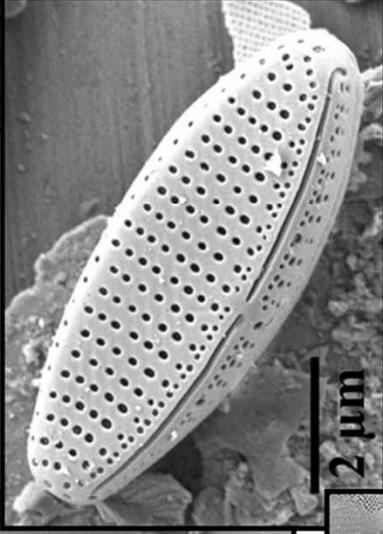
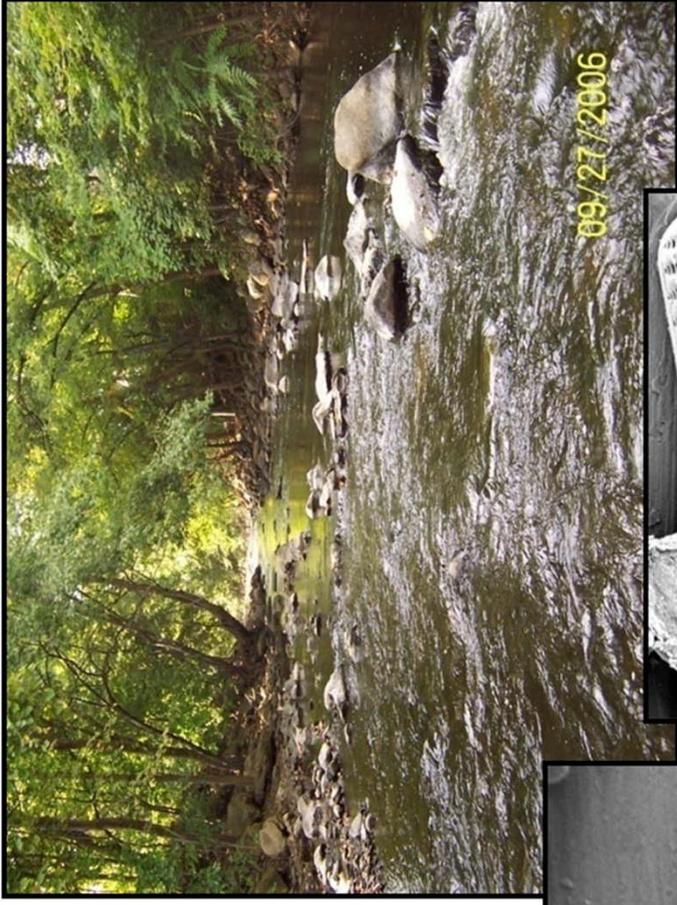
Table 3a: Recommended monitoring stations and analyses to meet AOC requirements in the River and Watershed

Focus Area	Management Question(s)	Location	Annual Cost ¹	Cost by Population ²		
				Exeter 64%	Stratham 28%	Newfields 8%
I - Squamscott River	<p>(a) Total Nitrogen concentrations in the river and downstream waters are trending toward nitrogen targets.</p> <p>(b) Significant improvements in dissolved oxygen, chlorophyll-a, and macroalgae levels have been documented.</p> <p>(c) Non-point source and stormwater point source reductions achieved are trending towards allocation targets and appropriate mechanisms are in place to ensure continued progress.</p>	<p>1 station in the Squamscott below Exeter WWTF monitored 1 xMonth (falling tide) for nutrients, TSS, and chlorophyll-a³.</p> <p>1 station in the Squamscott below Exeter WWTF discharge monitored continuously for dissolved oxygen with datasonde</p>	\$29,000	\$18,560	\$8,120	\$2,320
II- Exeter/ Squamscott Watershed		<p>3 stations in watershed monitored monthly for nutrients, TSS, and chlorophyll-a.</p> <p>3 stations monitored continuously for water level.</p>	\$12,000	\$7,680	\$3,360	\$960
			\$1,500	\$960	\$420	\$120
			\$42,500	\$27,200	\$11,900	\$3,400

Notes: ¹ All costs are estimated; actual costs will depend on details of the selected program including the number of samples collected, purchase price of equipment and selected subcontractor. Personnel and analytic costs are based on expanding existing UNH and NHDES programs. Costs assume that equipment purchase price will be amortized over 5 years (purchase price = \$15,000 for Squamscott data sonde, \$500 each for three watershed water level loggers).

² Population based on 2010 census data: Exeter has a population of 14,306; Stratham 6,533; Newfields 1,680.

Ecosystem Indicator for Great Bay



Attached Algae Indicator Monitoring

Controls Natural Variables:

- Flow
- Light
- Substrate
- Time

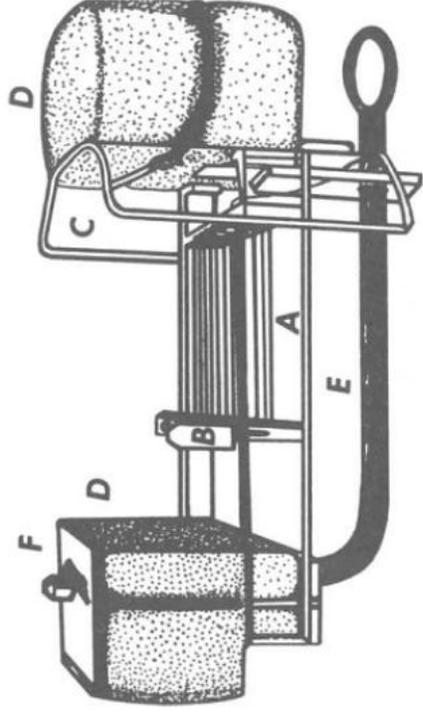
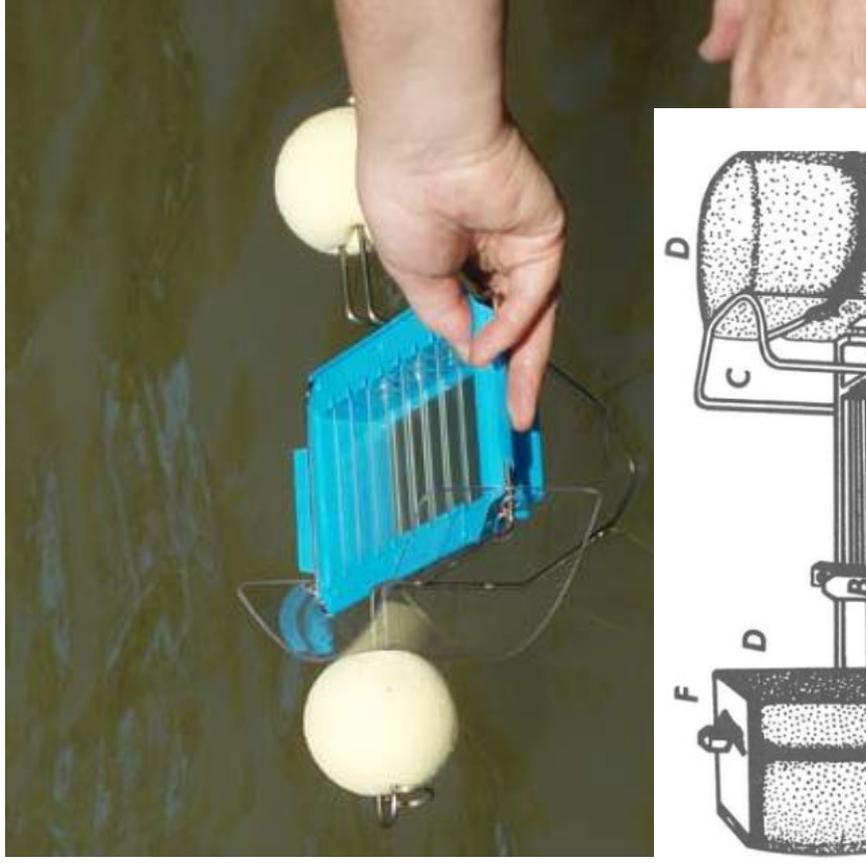
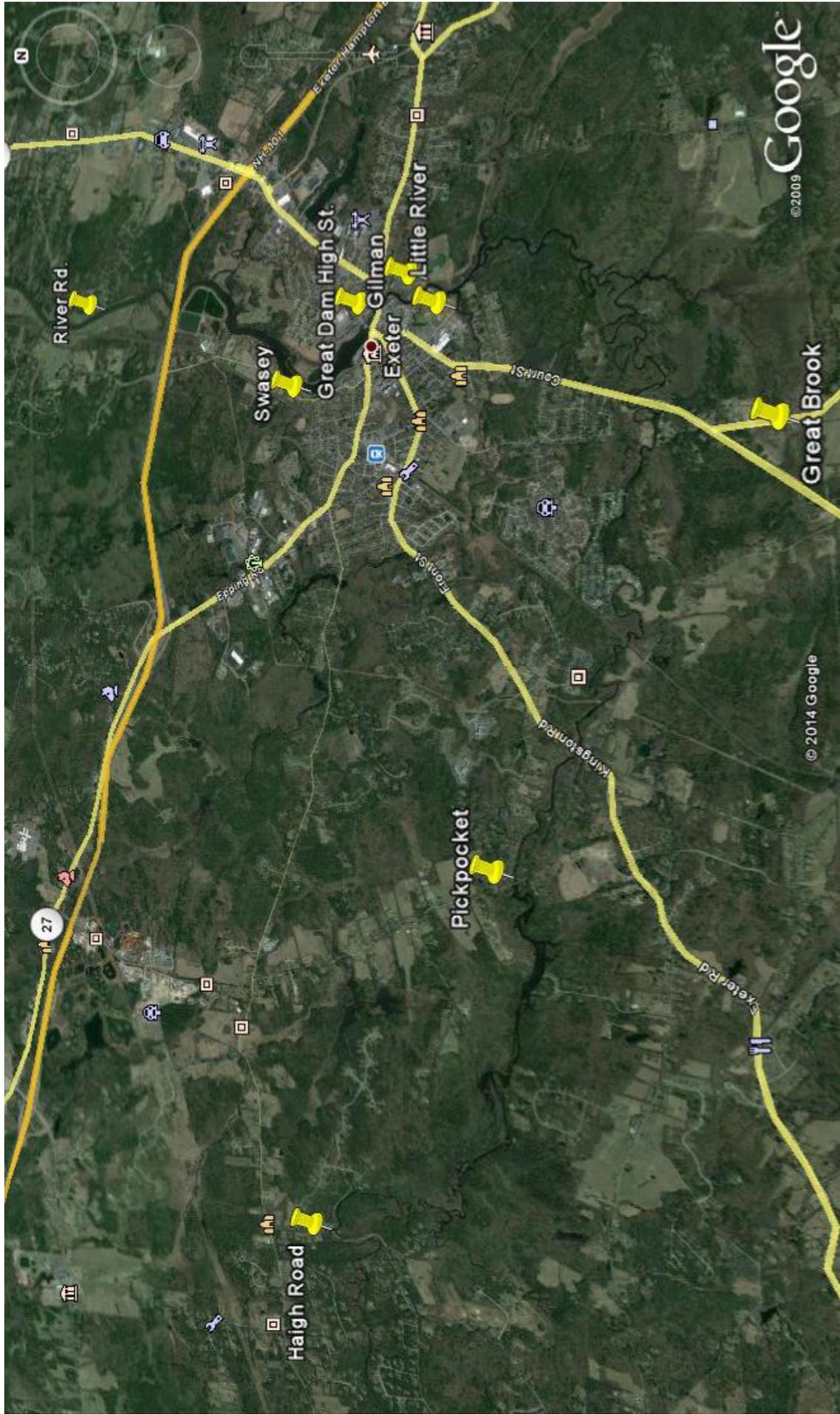
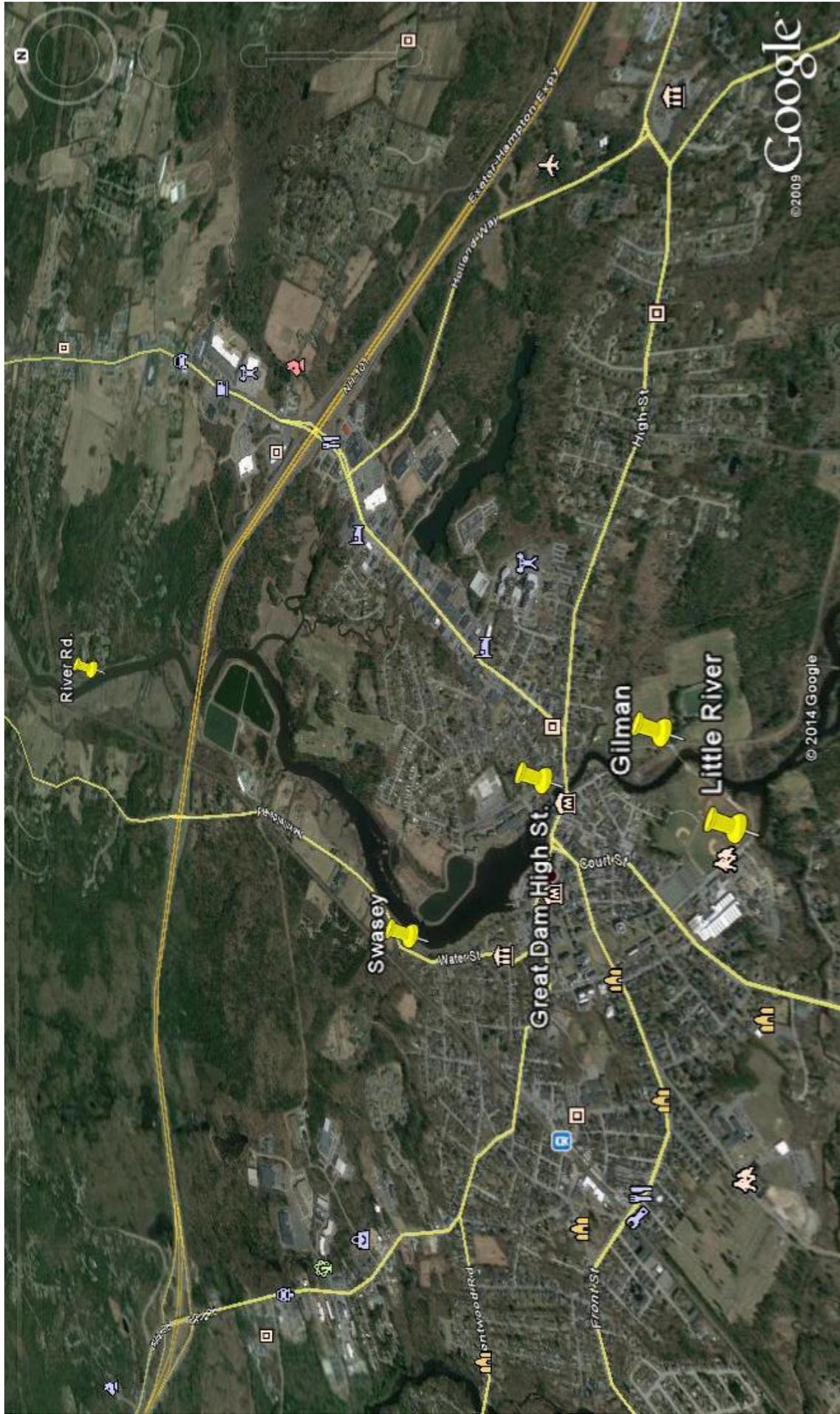


FIG. 2.—Catherwood diatometer: (A) slide holder, (B) retaining bar, (C) deflector (D) styrofoam float, (E) brass rod, and (F) identification tag.

WISE Attached Algae Monitoring - June-July and Aug- Sept 2014 Deployments

Station ID	Station Name	Waterbody	Location
WISEAA-001	Haigh Road	Exeter R.	Haigh Road Brentwood
WISEAA-002	Pickpocket	Exeter R.	Pickpocket Dam
WISEAA-003	Great Brook	Great Br.	Shaw Hill Rd. / Rte 150
WISEAA-004	Little River	Little R.	Chadwick La/Gilman St.
WISEAA-005	Gilman	Exeter R.	Gilman St./Gilman La
WISEAA-006	High St.	Exeter R.	High St. (Rte. 108)
WISEAA-007	Swasey	Exeter R.	0.75 km below String Bridge
WISEAA-008	Wheelwright	Wheelwright Cr.	Exeter Country Club below Parkman Creek Confl.
WISEAA-009	River Road	Squamscott R.	River Road
WISEAA-010	SWMP RR Bridge	Squamscott River Estuary	RR Bridge, Stratham
WISEAA-011	EPSCoR Wiswall	Lamprey R.	Wiswall Dam, above dam, at EPSCoR station
WISEAA-012	WRRC Packers Falls	Lamprey R.	Packers Falls, upstream of bridge
WISEAA-013	SWMP Lamprey	Lamprey River Estuary	Downtown Newmarket, Below Falls
WISEAA-014	SWMP Oyster	Oyster River Estuary	Durham, 500 m below dam, Jackson Landing
WISEAA-015	SWMP Buoy	Great Bav	Mid Great Bav





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River Rd.

Swasey

Great Dam High St.

Gilman

Little River

Frontwood Rd

Front St

Court St

Water St

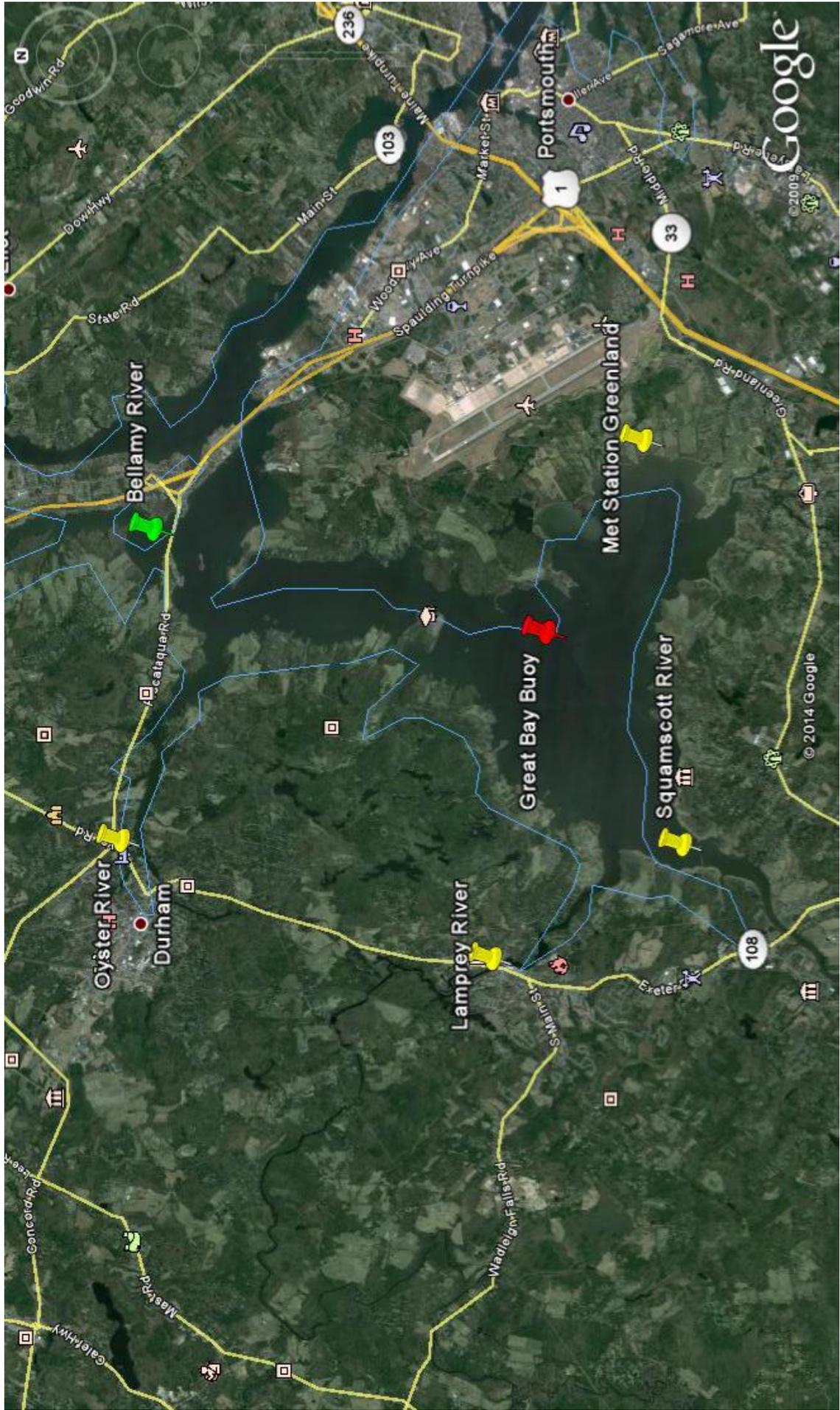
Swasey Rd

NH 103

Hollister Way

Exeter-Hampton Expy

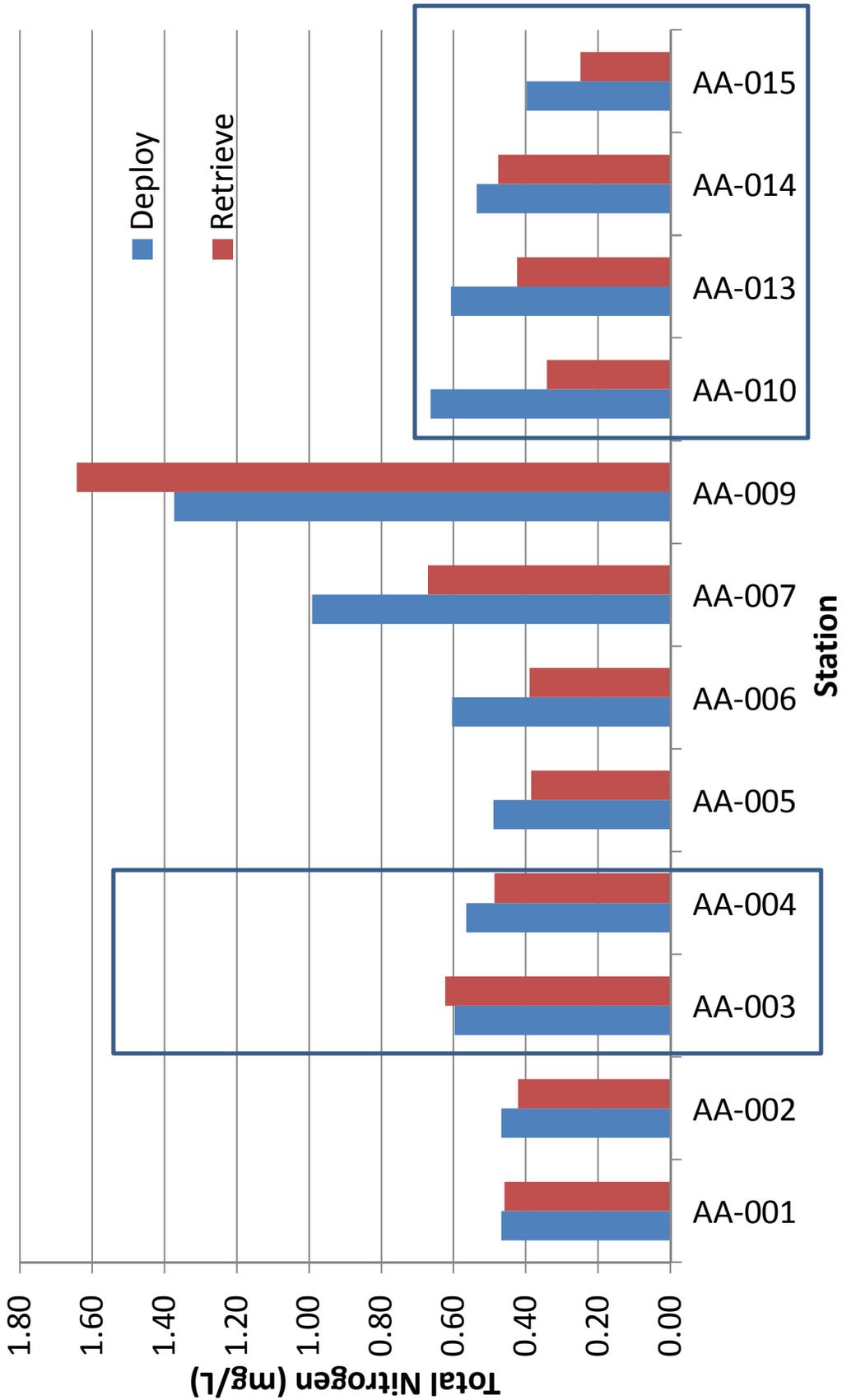
High St



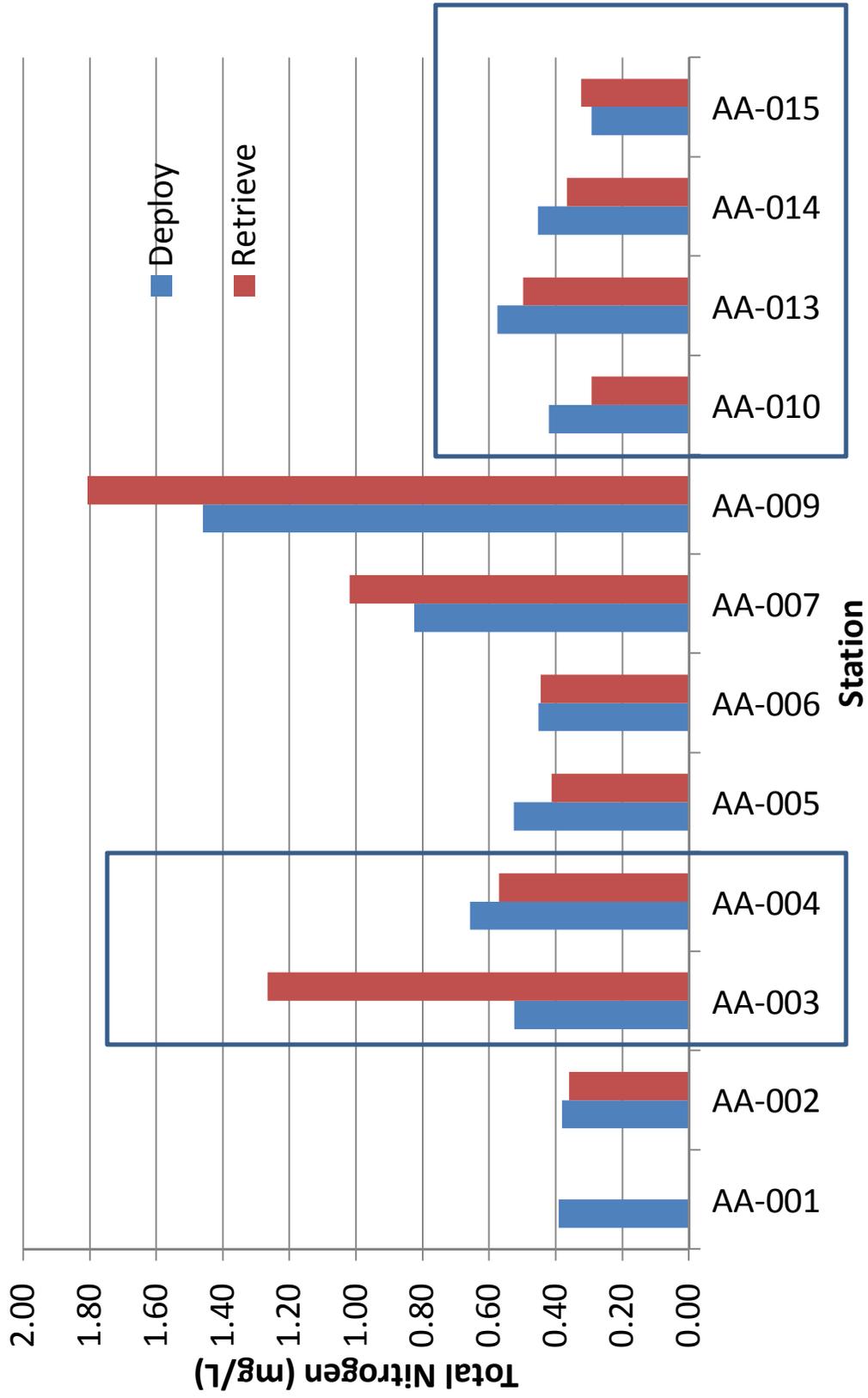
Squamscott-Exeter Monitoring Stations (Area and Nitrogen Loads)

Monitoring Station	Name	Drainage Area (acres)	Septic Load (lb N/yr)	Storm-water Load (lb N/yr)	Ground-water Load (lb N/yr)	Total Load (lb N/yr)
AA-001	Haigh Road	40629.5	66,698	53,934	16,992	137,624
AA-002	Pickpocket	47423.7	75,418	63,405	19,811	158,634
AA-003	Great Brook	5012.4	8,119	8,773	1,858	18,750
AA-004	Little River	10106.2	12,874	17,085	3,983	33,942
AA-005	Gilman	68496.4	94,857	98,500	28,027	221,385
AA-006	High Street	68668.5	94,857	99,222	28,067	222,146
AA-007	Swazey Pkwy	69040.3	94,857	100,730	28,157	223,745
AA-009	River Road	73566.4	101,739	110,579	29,817	242,135
AA-010	Squamscott RR	80442.8	114,897	122,634	32,462	269,993

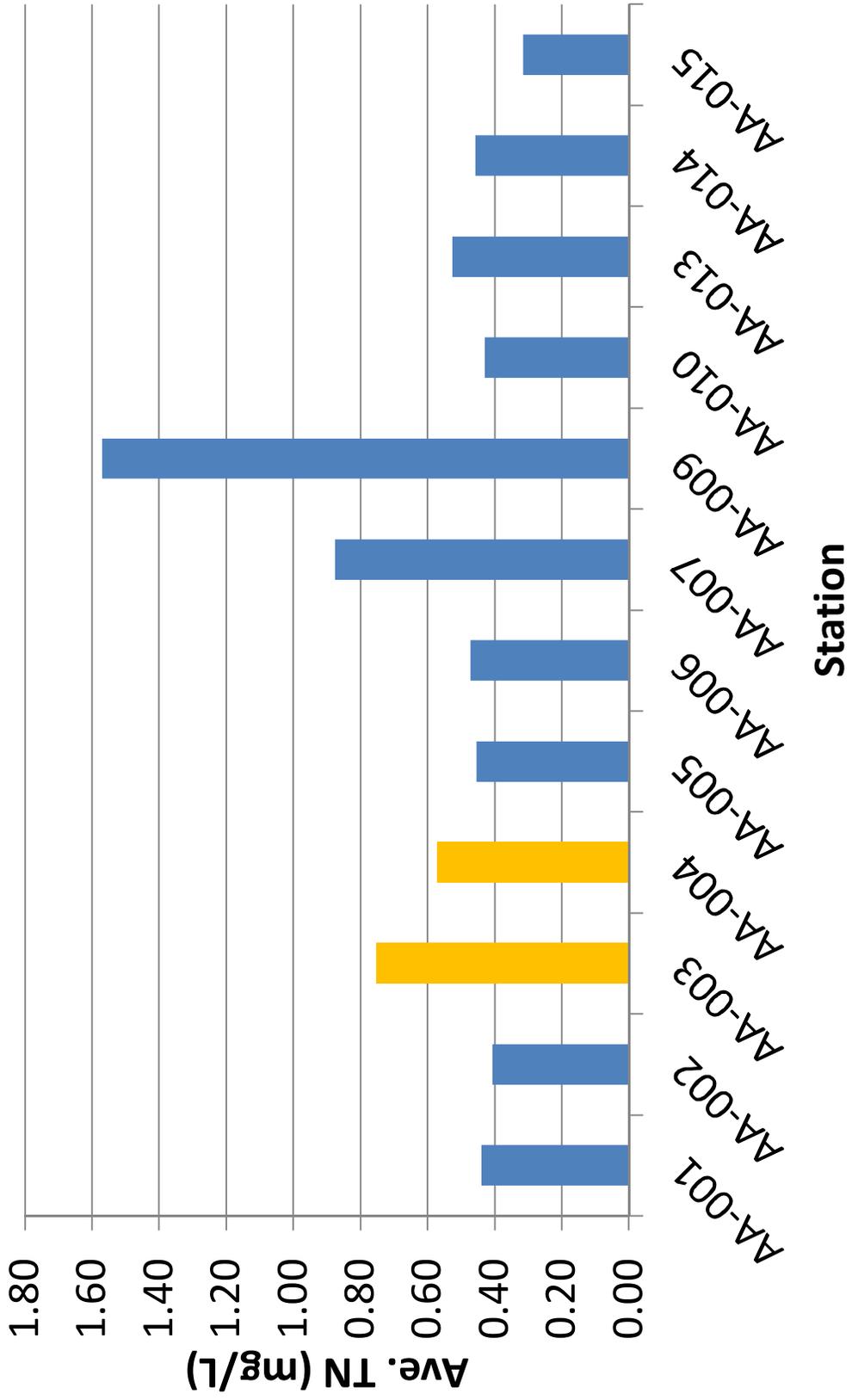
June-July 2014



August- September 2014



Average TN June - Sept 2014 (4 surveys)



Checklist for NPDES Permit No. NH0100871 Administrative Order on Consent Docket No. 13-010

No.	<u>REPORTING TASKS</u>	<u>REPORTING DEADLINE*</u> (Based on effective date of June 24, 2013)	<u>OVERLAPS WITH DRAFT MS4 REQUIREMENTS</u>	<u>ASSISTANCE FROM WISE PROJECT</u>
1.	<p>Submit progress reports to EPA and NHDES summarizing the compliance with the WWTFs and Interim Effluent Limitations (Section C.1).</p> <p>Included in the quarterly reports:</p> <ol style="list-style-type: none"> 1.1 Describe activities undertaken during the quarterly period directed at achieving compliance with the Order. 1.2 Identify all plans, reports and other deliverables required by the Order that have been completed and submitted during the reporting period. 1.3 Describe the expected activities to be taken during the next reporting period in order to achieve compliance with the Order. 	On or before 1/15, 4/15, 7/15, 10/15 of each year (until 7/15/2018)	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
2.	<p>Submit annual Total Nitrogen Control Plan Report to EPA and NHDES (Section E.1)</p> <p>These reports shall address:</p> <ol style="list-style-type: none"> 2.1 Total nitrogen (lbs) discharged from WWTF during previous year, 2.2 Operational changes implemented during previous year, 2.3 Status of total nitrogen non-point source and storm water point source accounting system development, 2.4 The status of the non-point and point source Nitrogen Control Plan development, 2.5 Description and accounting of activities conducted by Exeter as part of its Nitrogen Control Plan, and 2.6 Description of Exeter activities affecting the total nitrogen load to Great Bay during previous year. 	Beginning 1/31/2014 and annually thereafter	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Notes: Tracking point and non-point sources of nitrogen are part of the draft MS4 requirements.	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Notes: Products, including tracking tools, developed as part of the WISE project should assist the Town in completing Tasks 2.3 through 2.6.
3.	<p>Initiate construction of the WWTF (Section A.1)</p> <p>Necessary to achieve interim effluent limits set forth in Attachment</p>	6/30/2016	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>

	1.a in accordance with NHDES approval			
4.	Achieve substantial completion of construction of the WWTF (Section A.2) In accordance with NHDES approval	6/30/2018	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
5.	Submit a Total Nitrogen Non-point Source and Point Source Stormwater Control Plan to EPA and NHDES (Section D.4) Plan shall include: 5.1 5 year schedule for implementing specific control measures as allowed by state law to address identified non-point source and stormwater Nitrogen loadings in the Town of Exeter that contribute total nitrogen to the Great Bay estuary, including the Squamscott River. 5.2 If any category of de-minimis non-point source loadings identified in the tracking and accounting program are not included in the Nitrogen Control Plan, the Town shall include an explanation in the Plan of any such exclusions. The Nitrogen Control Plan shall be implemented in accordance with the schedules contained therein.	9/30/2018	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Notes: Draft MS4 permit requires an implementation schedule for specific control measures at end of permit cycle	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Notes: Products, including a menu of best management control practices and tracking tools, developed as part of the WISE project should assist the Town in completion of Task 5.
6.	Submit an Engineering Evaluation (Section E.2) That includes recommendations for the implementation of any additional measures necessary to achieve compliance with the NPDES Permit, or a justification for leaving the interim discharge limit set forth in Attachment 1.a in place (or lower the interim limit to a level below 8.0 mg/L but still above 3.0 mg/L) beyond that date. Must analyze: 6.1 Total Nitrogen concentrations in the Squamscott River and downstream are trending towards targets, 6.2 Documented significant improvements in dissolved oxygen, chlorophyll a, and macro algae levels, 6.3 Non-point source and stormwater point source reductions achieved are trending towards targets and mechanisms in place to ensure continued progress.	12/31/2023	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Notes: Products, including monitoring framework, menus of best management control practices and tracking tools, developed as part of the WISE project should assist the Town in completion of Task 6.

* For each specific action outlined in the Order, Exeter must submit a written notice of compliance or noncompliance within 14 days of each deadline. Noncompliance reporting must include a description, a description of actions to be taken, a description of factors that explain or mitigate the noncompliance, and an appropriate date for which Exeter will perform the required action. After a notification of noncompliance has been filed, compliance with the past-due requirement shall be reported by submitting any required documents or providing EPA and NHDES with a written report indicating that the required action has been achieved.

No.	COMPLIANCE TASKS	COMPLIANCE DEADLINE (Based on effective date of June 24, 2013)	OVERLAPS WITH DRAFT MS4 REQUIREMENTS	ASSISTANCE FROM WISE PROJECT
A.	<p>Track all activities that affect total Nitrogen load to the Great Bay Estuary. (Section D.1) This includes (not limited to):</p> <ul style="list-style-type: none"> A.1 New/modified septic systems, A.2 Decentralized WWTFs, A.3 Changes to the amount of effective impervious cover, A.4 Changes to the amount of disconnected impervious cover, A.5 Conversion of existing landscape to lawns/turf and any new or modified BMPs. 	Effective Immediately	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Notes: Tracking requirements will also include dog waste, turf management and agriculture.	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Notes: Tracking tools that affect nitrogen load could be developed as part of the WISE project.
B.	<p>Comprehensive subwatershed-based tracking/accounting system (Section D.2) Coordinate with the NHDES, other Great Bay communities and watershed organizations in NHDES's efforts to develop and utilize a comprehensive subwatershed-based tracking/accounting system for quantifying nitrogen loading changes from Exeter to the Great Bay Estuary.</p>	Effective Immediately	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> Notes: Draft MS4 permit does not require a subwatershed-based tracking and accounting system.	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Notes: The tracking tools and accounting system developed for the WISE project, could be adopted by the subwatershed communities.
C.	<p>Coordinate with the NHDES to develop a subwatershed community based nitrogen allocation (Section D.3)</p>	Effective Immediately	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
D.	<p>The interim limits in Attachment 1.a shall be in effect unless and until EPA determines that the Town has not complied with the milestones set forth in the Order (Section B.3). If and when EPA determines that the interim limits shall no longer remain in effect, the Town shall fund, design, construct and operate additional treatment facilities to meet the NPDES Permit limit of 3.0 mg/l</p>	Effective Immediately and no later than 5 years from EPA's determination	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
E.	<p>Operate the WWTF so as to maximize removal efficiencies and effluent quality (Section B.4) using all necessary treatment equipment available at the facility for optimization at the flow and load received but not requiring methanol or other carbon addition.</p>	At all times	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>

F.	Comply with the interim total nitrogen effluent limitations and monitoring requirements contained in Attachment 1 of the Order (Section B.1 and B.2).	Until 6/30/2019 or 12 months after substantial completion of the WWTF (whichever is sooner)	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
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Checklist for 2013 Draft NH Small MS4 General Permit Requirements

<u>TASK</u>	<u>DEADLINE</u> (in relation to permit effective date)	<u>OVERLAPS</u> <u>WITH AOC</u> <u>REQUIREMENTS</u>	<u>ASSISTANCE FROM WISE</u> <u>PROJECT</u>
1. Submit Notice of Intent (NOI) (Part 1.7.2)			
1.1 NOI is signed by appropriate official (<i>Appendix B, Subparagraph 11</i>)	Within ninety (90) Days	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
1.2 NOI contains certification (<i>Part 1.7.2.c</i>)			
1.3 NOI certifies eligibility regarding endangered species (<i>Part 1.9.1</i>)			
1.4 NOI certifies eligibility regarding historic properties (<i>Part 1.9.2</i>)			
2. Develop, implement and enforce a written Stormwater Management Program (SWMP) (Part 1.10)			
2.1 Identify responsible people for program implementation	Within one (1) year	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
2.2 List all receiving water body segments, their classification under the applicable water quality standards, any impairment(s) and associated pollutant(s) of concern, applicable TMDLs and WLAs, and number of outfalls from the MS4 that discharge to each water body		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES (Based on scope) <input type="checkbox"/> NO Notes: WISE Project Team would need to access the size of the scope to complete this for each Town. However, portions of this task could be completed.
2.3 Document all public drinking water sources (surface water and groundwater) that may be impacted by MS4		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES (Based on scope) <input type="checkbox"/> NO Notes: WISE Project Team would need to access the size of the scope to complete this for each Town. However, portions of this task could be completed.
2.4 List all interconnected MS4s and other separate storm sewer systems receiving a discharge from the permitted MS4, the receiving water		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES (Based on scope) <input type="checkbox"/> NO

body segment(s) ultimately receiving the discharge, their classification under the applicable state water quality standards, any impairment(s) and associated pollutant(s) of concern, applicable TMDLs and WLAs, and the number of interconnections			Notes: WISE Project Team would need to access the size of the scope to complete this for each Town. However, portions of this task could be completed.
2.5 Documentation to support permittee's compliance with Endangered Species requirements (<i>Part 1.9.1</i>)		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
2.6 Documentation to support permittee's compliance with historic properties requirements (<i>Part 1.9.2</i>)		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
2.7 Map of separate storm sewer system (<i>Part 2.3.4.6</i>)	Within one (1) year	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES (Based on scope) <input type="checkbox"/> NO Notes: WISE Project Team would need to access the size of the scope to complete this for each Town. However, portions of this task could be completed.
2.8 Listing of all discharges that were found to cause or contribute to an exceedance of applicable water quality standards and a description of the response(s) (<i>Part 2.1.1.c</i>)		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES (Based on scope) <input type="checkbox"/> NO Notes: WISE Project Team would need to access the size of the scope to complete this for the Towns. However, portions of this task could be completed using information already generated in the watershed by other projects.
2.9 Description of practices to achieve compliance with Discharges Subject to an Approved TMDL (<i>Part 2.2.1</i>)		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
2.10 Water Quality Response Plans (WQRP) including the person(s) or department responsible for the measure; the BMPs for the control measure or permit requirement; and the measurable goal(s) for each BMP. Each measurable goal shall include milestones and timeframes for its implementation and have a quantity or quality associated with its endpoint. Each goal must have a measure of assessment associated with it. (<i>Part 2.2.2</i>)		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES (Partial) <input type="checkbox"/> NO Notes: WISE Project Team will provide the foundation and tools for development of the WQRP, including tracking and implementation tools.

(Must also comply with the Great Bay Nitrogen Requirements (Part 2.2.3): Additional and modified BMPs included in the WQRP shall include, at a minimum, the BMPs identified in Appendix H).			
2.11 Description of any other practices to achieve compliance with water quality based requirements of the Water Quality Based Effluent Limitations (Part 2.1)		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES (Partial) <input type="checkbox"/> NO Notes: WISE Project Team will provide a list of practices to achieve compliance with water quality requirements.
2.12 Description of practices to achieve compliance with Requirements to Reduce Pollutants to the Maximum Extent Practicable (MEP) (Part 2.3) Identify the person(s) or department responsible for the measure; the BMPs for the control measure or permit requirement; and the measurable goal(s) for each BMP. Each measurable goal shall include milestones and timeframes for its implementation and have a quantity or quality associated with its endpoint. Each goal must have a measure of assessment associated with it.		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES (Partial) <input type="checkbox"/> NO Notes: WISE Project Team will provide the foundation and tools for the Towns to determine the necessary practices need to reduce pollutants.
2.13 Description of measures to avoid or minimize impacts to public and known private drinking water sources (surface water and groundwater). The permittee is also encouraged to include provisions to notify public water supplies in the event of an emergency.		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
2.14 Annual Program Evaluation (Part 4.1)		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
3. Illicit Discharge Detection and Elimination (IDDE) Program (Part 2.3.4)			
3.1 Outfall Inventory (Part 2.3.4.7) (include inventory in annual report)	Within one (1) year	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
3.2 System Mapping – Develop a revised and more detailed map than was required by the MS4-2003 (Part 2.3.4.6) (include progress towards completion of map in each annual report) <ul style="list-style-type: none">Required mapping elements: Municipal separate storm sewer; catchment delineations; waterbodies; municipal sanitary sewer system; municipal combined sewer system; storm sewer material, size and age; sanitary sewer system material, size and age; properties known or suspected to be served by a septic system; areas that have been or could be influenced by septic system discharges; location of	Within two (2) years	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES (Partial) <input type="checkbox"/> NO Notes: The Town of Exeter will provide guidance to other Towns on their methods and lessons learned. WISE Team will provide map elements including waterbodies and properties and locations of septic systems. The WISE Team will work

suspected, confirmed and corrected illicit discharges.			with the Towns of Stratham and Newfields to determine the scope of providing additional mapping elements.
3.3 Complete dry weather screening and sampling (where flowing) of every MS4 outfall and interconnection (except Excluded and Problem Catchments). May rely on screening conducted under the MS4-2003, pursuant to an EPA enforcement action, or by the state or EPA to the extent that it meets the requirements. <i>(Part 2.3.4.8.d)</i>	Within three (3) years	<input checked="" type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
3.4 Outfall Interconnection Screening and Sampling <i>(Part 2.3.4.8.d)</i>	Begin within three (3) months of investigation procedure finalization and no later than 15 months	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<p>3.5 Assessment and Priority Ranking of Catchments <i>(Part 2.3.4.8.c)</i>. Permittee shall classify each catchment into one of the following categories:</p> <ul style="list-style-type: none"> • Excluded Catchments: No potential illicit discharge • Problem Catchments: Known or suspected contributions of illicit discharges • High Priority Catchments: Discharging to an area of concern to public health • Low Priority Catchment <p>Priority ranking shall be done based on screening factors and should consider the following: past complaints and reports; poor dry weather receiving water quality; density of generating sites; age of surrounding infrastructure; sewer conversion; historic combined sewer systems; density of aging septic systems; and culverted streams.</p>			
i. Complete the Catchment Investigation Procedure in a minimum of 80% of the MS4 area served by Problem Catchments	Within three (3) years	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
ii. Complete the Catchment Investigation Procedure in 100% of Problem Catchments	Within five (5) years	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
iii. Implement the Catchment Investigation Procedure in every catchment of the MS4 where information indicates sewer input including outfall/interconnection screening sewer input based on olfactory/visual evidence or sampling results (ammonia ≥ 0.5 mg/l, surfactants ≥ 0.25 mg/l, and bacteria levels greater than the water quality criteria applicable to the receiving water; or ammonia ≥ 0.5 mg/l, surfactants ≥ 0.25 mg/l, and detectable levels of chlorine)	Within five (5) years	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
iv. Complete the Catchment Investigation Procedure in 40% of the area served by all MS4 catchments	Within five (5) years	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

<p>v. Complete the Catchment Investigation Procedure in 100% of the area served by all MS4 catchments. May count the area of low priority catchments only if the Catchment Investigation has been started in all other MS4 catchments (considered “started” if Part 2.3.4.8.e.i-ii is complete).</p>	<p>Within ten (10) years</p>	<p><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p>	<p><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p>
<p>3.6 Where catchments do not contain junction manholes, the dry weather screening and sampling shall be considered as meeting the manhole inspection requirement. In these catchments dry weather screenings that indicate potential presence of illicit discharges shall be further investigated (<i>Part 2.3.4.8.e.iii</i>). Investigations in these catchments may be considered complete where dry weather screening reveals no flow; no evidence of illicit discharges or SSOs is indicated through sampling results or visual or olfactory means; and no wet weather System Vulnerability Factors are identified.</p>		<p><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p>	<p><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p>
<p>3.7 Track progress towards these milestones</p>	<p>Each annual report</p>	<p><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p>	<p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>Notes: WISE Project Team will provide the foundation and tools for the Towns to determine the necessary practices need to reduce pollutants.</p>
<p>4. Public Education and Outreach (Part 2.3.2)</p>			
<p>4.1 Distribute a minimum of two (2) educational messages to:</p> <ul style="list-style-type: none"> • Residents; • Businesses, institutions (private colleges, private schools, hospitals), and commercial facilities; • Developers (construction); and • Industrial facilities. <p>The distribution of materials to each audience shall be spaced at least one year apart. Educational messages may be printed materials such as brochures or newsletters; electronic materials such as websites; mass media such as newspaper articles or public service announcement (radio or cable); or displays in a public area such as town/city hall. The permittee may use existing materials if they are appropriate for the message the permittee chooses to deliver or the permittee may develop its own educational materials. The permittee may partner with other MS4s, community groups</p>	<p>Beginning the first year of the permit, distribute a minimum of two (2) education messages over the permit audience; distribute at least eight educational messages during the permit term</p>	<p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p>	<p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>Notes: WISE Project Team will provide the foundation and tools for the Towns to determine the necessary practices need to reduce pollutants.</p>

<p>or watershed associations to implement the education program (<i>Part 2.3.2.1.b</i>).</p> <p><i>If the small MS4 area has greater than thirty percent of its residents serviced by septic systems, the permittee shall include maintenance of septic systems as part of its education program.</i></p>			
<p>5. Indicators of IDDE Program Progress</p>			
<p>5.1 Define or describe indicators for tracking program success. At a minimum, indicators shall include measures that demonstrate efforts to locate illicit discharges, the number of SSOs and illicit discharges identified and removed, the percent and area in acres of the catchment area served by the MS4 evaluated using the catchment investigation procedure, and volume of sewage removed. Evaluate and report the overall effectiveness of the program based on the tracking indicators in the annual report (<i>Part 2.3.4.10</i>).</p>	<p>Each annual report</p>	<p><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p>	<p><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p>
<p>6. Provide training to employees involved in the IDDE program</p>			
<p>6.1 At a minimum, provide training to employees involved in IDDE program about the program, including how to recognize illicit discharges and SSOs. Report on the frequency and type of employee training in the annual report (<i>Part 2.3.4.11</i>).</p>	<p>Annually</p>	<p><input checked="" type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p>	<p><input checked="" type="checkbox"/> YES (Partial) <input type="checkbox"/> NO</p> <p>Notes: WISE Project Team will provide the general knowledge and guidance on the IDDE program which can be used to inform and educate employees.</p>
<p>7. Implement and enforce a Construction Site Stormwater Runoff Control Program (<i>Part 2.3.5</i>)</p>			
<p>7.1 Construction site stormwater runoff control program shall be designed to reduce pollutants in any stormwater runoff discharged to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. The program shall include disturbances less than one acre if that disturbance is part of a larger common plan of development or sale that would disturb one acre or more.</p> <p>Permittees authorized under the MS4-2003 shall continue to implement their existing programs and shall modify them as necessary to meet the requirements of this Part.</p>	<p>If not already existing, these procedures shall be completed within one (1) year</p>	<p><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p>	<p><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p>
<p>7.1.1. An ordinance or other regulatory mechanism that requires the</p>		<p><input type="checkbox"/> YES</p>	<p><input checked="" type="checkbox"/> YES</p>

<p>use of sediment and erosion control practices at construction sites. Development of an ordinance or other regulatory mechanism was a requirement of the MS4-2003 (See Part III.B.4) and was required to be effective by May 1, 2008.</p>		<input checked="" type="checkbox"/> NO	<input type="checkbox"/> NO Notes: WISE Project Team will provide resources and ordinances adopted by other Towns which could be adapted by the Towns.
<p>7.1.2. Written procedures for site inspections and enforcement of sediment and erosion control measures. The procedures shall clearly define who is responsible for site inspections as well as who has authority to implement enforcement procedures. The program shall provide that the permittee may, to the extent authorized by law, impose sanctions to ensure compliance with the local program. These procedures and regulatory authorities shall be documented in the SWMP.</p>		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Notes: WISE Project Team will provide resources for site inspection procedures and enforcement, which may be used by the Town in development of their procedures.
<p>7.1.3. Requirements for construction operators to implement a sediment and erosion control program. The program shall include BMPs appropriate for the conditions at the construction site. The program may include references to BMP design standards in state manuals or design standards specific to the MS4. EPA supports and encourages the use of design standards in local programs. Examples of appropriate sediment and erosion control measures for construction sites include local requirements to:</p> <ul style="list-style-type: none"> • minimize the amount of disturbed area and protect natural resources; • stabilize sites when projects are complete or operations have temporarily ceased; • protect slopes on the construction site; • protect all storm drain inlets and armor all newly constructed outlets; • use perimeter controls at the site; • stabilize construction site entrances and exits to prevent off-site tracking; and • inspect stormwater controls at consistent intervals. 		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Notes: WISE Project Team will provide resources for implementation of sediment and erosion controls including appropriate practices, design standards and engineering best practices.
<p>7.1.4. Requirements to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes. These wastes may not be discharged to the MS4.</p>	<p>If not already existing, this procedure shall be completed within one (1) year</p>	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Notes: WISE Project Team will provide resources for construction site good housekeeping practices.

<p>7.1.5. Written procedures for site plan review. Site plan review shall include a review by the permittee of the site design, the planned operations at the construction site, planned BMPs during the construction phase, and the planned BMPs to be used to manage runoff created after development. The review procedure shall incorporate procedures for the consideration of potential water quality impacts; procedures for pre-construction review; and procedures for receipt and consideration of information submitted by the public. Site plan review procedure shall include evaluation of opportunities for use of low impact design and green infrastructure. When the opportunity exists, the permittee shall encourage project proponents to incorporate these practices into the site design. The permittee shall track the number of site reviews, inspections, and enforcement actions.</p>		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Notes: WISE Project Team will provide resources and examples of site plan review procedures which may be adapted by the Towns.
8. Implement and enforce a Stormwater Management in New Development and Redevelopment program (Post Construction Stormwater Management) (Part 2.3.6)			
<p>8.1 Develop a report assessing current street design and parking lot guidelines and other local requirements that affect the creation of impervious cover. This assessment shall be used to provide information to determine if the design standards for streets and parking lots can be modified to support low impact design options. If the assessment indicates that changes can be made, the assessment shall include recommendations and proposed schedules to incorporate policies and standards into relevant documents and procedures to minimize impervious cover attributable to parking areas and street designs. The permittee shall involve any local planning boards and local transportation boards in this assessment to the extent feasible (<i>Part 2.3.6.6</i>).</p> <p>(Report status of this assessment in each annual report.)</p>	<p>Within two (2) years</p>	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Notes: WISE Project Team will provide resources street design and parking lot guidelines with low impact development design which may be adapted by the Towns.
<p>8.2 Develop a report assessing existing local regulations (<i>Part 2.3.6.7</i>)</p>	<p>Within three (3) years</p>	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<p>8.3 Directly Connected Impervious Area (DCIA)</p>			
<p>8.3.1. Estimate the annual increase or decrease in the number of acres of impervious area (<i>Part 2.3.6.8.a</i>)</p>		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Notes: WISE Project Team will estimate the current total impervious area, directly connected impervious

			area and effective impervious area for each of the Towns.
8.3.2. Complete an inventory and priority ranking of permittee-owned property and existing infrastructure that could be retrofitted with BMPs designed to reduce the frequency, volume and pollutant loads of stormwater discharges to its MS4 through the mitigation of impervious area (Part 2.3.6.8.b).	Within two (2) years	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES (Partial) <input type="checkbox"/> NO Notes: WISE Project Team will work with the Towns to develop an inventory of the existing best management practices and providing materials of retrofit BMPs which may be used on Town owned property.
8.3.3. Estimate for each sub-basin identified , the number of acres of impervious area (IA) and DCIA draining to its MS4 that have been added or removed during the prior year (Part 2.3.6.8.c)	Second year annual report and in each subsequent annual report.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES (Partial) <input type="checkbox"/> NO Notes: WISE Project Team will identify the number of acres of impervious area by Town. The Project Team will evaluate the level of effort to estimate the number of current acres per sub-basin.
8.3.4. Report on those permittee-owned properties and infrastructure inventoried that have been retrofitted with BMPs to mitigate IA and DCIA (Part 2.3.6.8.c)	Third year annual report and in each subsequent annual report	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
9. Develop an Operation and Maintenance Program (Part 2.3.7) This program shall be included as part of the SWMP (item 2 of this checklist)			
9.1 Develop an inventory of facilities (Part 2.3.7.1)	Within six (6) months Review annually and update as necessary	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES (Partial) <input type="checkbox"/> NO Notes: WISE Project Team will provide inventory the existing best management practices and provide operation and maintenance materials for existing and recommended practices.

10. Develop and implement a written Stormwater Pollution Prevention Plan (SWPPP) for permittee-owned maintenance garages, public works yards, transfer stations and other waste handling facilities where pollutants are exposed to stormwater (Part 2.3.7.2).		No later than two (2) years	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
11. Submit Annual Report				
11.1	A self-assessment review of compliance with the permit and conditions	Annually, due ninety (90) days from the close of each reporting period.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
11.2	An assessment of the appropriateness of the selected BMPs		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
11.3	The status of any plans or activities required by the Water Quality Based Effluent Limitations (Part 2.1) and/or Discharges to Impaired Waters (Part 2.2) including: <ul style="list-style-type: none"> • Identification of all discharges determined to be causing or contributing to an exceedance of water quality standards and description of response including all items required by Part 2.1.1.c; • For discharges subject to TMDLs, identification of specific BMPs used to address the pollutant identified as the cause of impairment and assessment of the BMPs effectiveness at controlling the pollutant (Part 2.2.1); • For discharges to impaired waters and the nitrogen-impaired waters of the Great Bay watershed and their tributaries, a description of each WQRP including the items required by Part 2.2.2.c.; and • For discharges to chloride impaired waters, identification of the specific BMPs used to address the pollutant and assessment of the BMPs effectiveness at controlling the pollutant. 		<input checked="" type="checkbox"/> YES (Partial) <input type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
11.4	An assessment of the progress towards achieving the measurable goals and objectives of each control measure in the Requirements to Reduce Pollutants to the Maximum Extent Practicable (MEP) (Part 2.3) including <ul style="list-style-type: none"> • Evaluation of the public education program including a description of the targeted messages for each audience; method of distribution and dates of distribution; methods used to evaluate the program; and any changes to the program. 		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

<ul style="list-style-type: none"> • Description of the activities used to promote public participation including documentation of compliance with state public notice regulations. • Description of the activities related to implementation of the IDDE program including: status of the map; status and results of the illicit discharge potential ranking and assessment; identification of problem catchments; status of all protocols described in Parts 2.3.4. (program responsibilities and systematic procedure); number and identifier of catchments evaluated; number and identifier of outfalls screened; number of illicit discharges located; number of illicit discharges removed; gallons of flow removed; identification of tracking indicators and measures of progress based on those indicators; and employee training. • Evaluation of the construction runoff management including number of project plans reviewed; number of inspections; and number of enforcement actions. • Evaluation of stormwater management for new development and redevelopment including status of ordinance development and review; status of the street design assessment; and information on directly connected impervious area reductions. • Status of the O&M Programs required by Part 2.3.7.1. • Status of SWPPP required by Part 2.3.7.2 including inspection results. • Any additional reporting requirements in Part 3.0. 			
<p>11.5 All outfall screening and monitoring data collected by or on behalf of the permittee during the reporting period and cumulative for the permit term, including but not limited to all data collected pursuant to the IDDE Program (Parts 2.3.4) and Part 4.3. Also provide a description of any additional monitoring data received during the reporting period.</p>		<input checked="" type="checkbox"/> YES (Partial) <input type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<p>11.6 Description of activities for the next reporting cycle.</p>		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<p>11.7 Description of any changes in identified BMPs or measurable goals.</p>		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<p>11.8 Description of activities undertaken by any entity contracted for achieving any measurable goal or implementing any control measure.</p>		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

ATTACHMENT 10 - PRELIMINARY NITROGEN TRACKING SUMMARY TABLE
 TOTAL NITROGEN CONTROL PLAN ANNUAL REPORT FOR 2014
 Wright-Pierce, 29 January 2015

Category	Wastewater								Stormwater		Land Use				
Parcel	Zoning District	Class	Sewered	Septic System Type	Septic System <200m from Surface Water	Septic System Install Year	Permitted Bedrooms for Septic System	Design Flow (GPD)	Structural BMPs Installed	Non-Structural BMPs Installed	Land Converted to Turf / Grass (SF)	New Impervious Cover Created (SF)	Impervious Cover Removed (SF)	Impervious Cover Disconnected (SF)	Land Converted to Agriculture Fields / Pastures (SF)
098-023-0000	R-1	Residential	No	Bio-Kinetic	Yes	2014	4	600	-	-	-	-	-	-	-
100-001-0000	R-1	Residential	No	Conventional	No	2014	4	600	-	-	-	-	-	-	-
038-010-0000	R-1	Residential	No	Conventional	No	2014	4	600	-	-	-	2380	-	2380	-
085-087-0001	R-2	Residential	Yes	-	-	-	-	-	-	-	3100	3630	-	-	-
087-023-0003	R-2	Residential	Yes	-	-	-	-	-	-	-	-	4940	-	4940	-
055-056-0000	C-3	Commercial							-	-	-	24550	-	24550	-
024-005-0000	RU	Residential	No	Conventional	No	2014	3	450	-	-	5440	6450	-	-	-
073-149-0009	C-1	Commercial	Yes	-	-	-	-	-	-	-	-	1370	-	-	-
095-079-0010	R-2	Residential	Yes	-	-	-	-	-			9690	3610	-	-	-
095-079-0001	R-2	Residential	Yes	-	-	-	-	-			6400	2840	-	-	-
095-079-0009	R-2	Residential	Yes	-	-	-	-	-			5260	4210	-	-	-
095-079-0018	R-2	Residential	Yes	-	-	-	-	-			4210	3220	-	-	-
095-075-0017	R-2	Residential	Yes	-	-	-	-	-			4610	3940	-	-	-
090-033-0002	R-2	Residential	Yes	-	-	-	-	-	-	-	-	860	-	860	-
063-276-0000	R-2	Residential	Yes	-	-	-	-	-	-	-	380	-	380	-	-
064-105-0086	R-2	Residential	Yes	-	-	-	-	-	-	-	920	-	920	-	-
085-086-0000	R-2	Residential	Yes	-	-	-	-	-	-	-	-	310	-	-	-
018-014-0000	RU	Residential	No						-	-	-	2080	-	2080	-
017-011-0001	RU	Residential	No						-	-	-	3080	-	3080	-
094-028-0000	R-2	Residential	Yes	-	-	-	-	-	-	-	-	530	-	-	-
071-009-0000	C-1	Commercial	Yes	-	-	-	-	-			-	480	-	-	-
064-105-0055	R-2	Residential	Yes	-	-	-	-	-			1020	-	1020	-	-
072-070-0000	C-1	Commercial	Yes	-	-	-	-	-			4290	-	4290	-	-
Totals							15	2250	0	0	45320	68480	6610	37890	0

Key:		Unknown
		Estimated
	-	None
	#	Known

STOP!

**WHAT YOU DO TO
YOUR LAWN
AFFECTS OUR RIVERS,
STREAMS, AND
DRINKING WATER**

**BEFORE YOU APPLY THOSE
LAWN PRODUCTS, KNOW
THESE IMPORTANT FACTS:**

FACT

The Nitrogen and Phosphorus in fertilizers can travel great distances and end up in local waterways. Once the nutrients from fertilizer enter a water body, they dramatically increase the growth of algae. Algae blocks sunlight and leads to the death of fish and aquatic vegetation.

FACT

Pesticides & Herbicides can travel from your lawn and gardens and contaminate our waterways with chemicals that are toxic to both humans and animals.

TIPS

TEST YOUR SOIL

You may not need to add anything. For more information on the soil testing program at UNH, call 603-862-3200.

USE ORGANIC MATERIALS

Grass clippings can provide the soil with nutrients, reducing chemical needs by up to 25%. You can use compost as a slow-release fertilizer. *Compost is available FREE at the Transfer Station.*

USE SLOW RELEASE FERTILIZERS

Slow release fertilizers provide a more controlled release of nitrogen than other products. They rely on chemical or microbial activity in order to release their nutrients, making it less likely that they will reach our waterways.

FOLLOW DIRECTIONS

Fertilizers are sold using a formula of three numbers (i.e. 10-20-10, 5-10-5). The 1st number is Nitrogen, 2nd is Phosphorus, and the 3rd number is Potassium.

NEVER APPLY LAWN CHEMICALS BEFORE A HEAVY RAIN

Proper irrigation will help the fertilizer be absorbed, making it less likely to runoff.

HANDLE AND STORE LAWN CHEMICALS SAFELY

Do not mix, apply, or dispose of pesticides or herbicides within 100 ft. of your well, a storm drain, or any surface water.

HOUSEHOLD HAZARDOUS WASTE COLLECTION DAY

Dispose of all unwanted chemicals at the Household Hazardous Waste Collection Day, held each year on the 1st Saturday in October.

**IF YOU HAVE ANY QUESTIONS,
PLEASE CALL 603-772-1345, OR VISIT
WWW.TOWN.EXETER.NH.US/STORMWATER**

**STORMWATER RUNOFF
IS CONSIDERED THE NO. 1
SOURCE OF WATER
POLLUTION IN
THE US!**

— US EPA

PROVIDED BY THE
TOWN OF EXETER
DEPARTMENT OF
PUBLIC WORKS



DO YOU REALIZE?

- That pouring, blowing, or sweeping debris into the streets could lead to the polluting of Exeter's rivers?
- Storm drains are designed to collect rainwater from streets, parking lots and rooftops as quickly as possible to prevent flooding. Storm drains discharge runoff directly to waterways without treatment.
- The improper disposal of detergents, oil, chemicals and debris into the storm drains impacts the water quality of our rivers and it is illegal.

MATERIALS REQUEST

FILL OUT POSTCARD, ADD POSTAGE AND MAIL.
THANK YOU FOR YOUR SUPPORT.

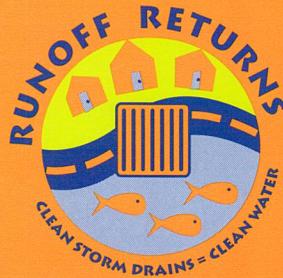
- | | |
|---|------------------------------------|
| <input type="checkbox"/> Stormwater Logo Sign | <input type="checkbox"/> Bookmarks |
| <input type="checkbox"/> Kid's Stickers | <input type="checkbox"/> Flyers |
| <input type="checkbox"/> Paper Coasters | |

BUSINESS

CONTACT NAME

ADDRESS

PHONE



EXETER CLEAN WATER CAMPAIGN
SPONSORED BY:

THE TOWN OF EXETER –
DEPARTMENT OF PUBLIC WORKS

10 FRONT STREET
EXETER, NH 03833

PHONE: 603-778-0591

FAX: 603-772-1355

E-MAIL: PDUFFY@EXETERNH.ORG



JOIN THE EXETER CLEAN WATER CAMPAIGN!

LOCAL BUSINESSES
CAN HELP KEEP
EXETER'S WATER CLEAN.



STORMWATER RUNOFF IMPACTS WATER QUALITY

Local businesses can be a part of the Exeter Clean Water Campaign. The Town of Exeter wants to partner with local businesses to help educate the community and to participate in an effort to improve our local water quality.

EXETER IMPACTED BY NEW CLEAN WATER REGULATIONS

The Stormwater Phase II Rule requires certain communities with storm drainage systems to obtain a National Pollutant Discharge Elimination System (NPDES) permit and develop a stormwater management program designed to prevent harmful pollutants from being washed by stormwater runoff into local waterways.

Stormwater (rain and snow melt) flows into the municipal storm drainage system (catch basins) and is discharged to our rivers and streams without treatment.

Common pollutants include oil & grease, pesticides, sediment and carelessly discarded trash, such as cigarette butts, paper wrappers, and plastic bottles. These pollutants can impair the waterways thereby discouraging recreational uses, contaminating drinking water sources, and interfering with the habitat for fish and wildlife.

EXETER'S STORMWATER MANAGEMENT PROGRAM

The U.S. Environmental Protection Agency (EPA) is the permit authority for New Hampshire. EPA requires Stormwater Management Programs to include the following Six Minimum Control Measures:

- 1) Public Education
- 2) Public Participation
- 3) Illicit Discharge Detection and Elimination
- 4) Construction Site Runoff Control
- 5) Post Construction Runoff Control
- 6) Pollution Prevention/Good Housekeeping for Municipal Operations

WHAT DOWNTOWN BUSINESSES CAN DO TO HELP PREVENT STORMWATER POLLUTION:

- DISPOSE OF BUSINESS SWEEPINGS IN THE TRASH
- DISPOSE MOP WATER TO SANITARY SEWER
- AVOID TOXIC MATERIALS SUCH AS CLEANERS TO THE EXTENT POSSIBLE
- MAKE SURE ALL TRASH IS BAGGED AND TIED AND DUMPSTERS ARE CLOSED
- DO NOT LOCATE DUMPSTERS NEXT TO CATCH BASINS OR WATERWAYS
- INSTALL & PROPERLY MAINTAIN GREASE TRAPS & INCEPTORS
- RECYCLE WASTE COOKING OIL – NEVER POUR DOWN DRAINS OR DUMP OUTSIDE
- DO NOT CLEAN EQUIPMENT OUTDOORS – DETERGENTS, CHEMICALS AND GREASE IMPACT OUR WATER QUALITY

PUBLIC EDUCATION AND PARTICIPATION

We believe that education is the most important element in the Stormwater Program. Many people simply do not realize that the water that flows into catch basins goes directly to the river or other waterways without treatment. Once people realize that their individual actions impact their local waterways, they will want to keep their streets litter free, properly dispose of pet waste, be careful when applying fertilizer and pesticides, and make sure their automobiles are not leaking oil or other fluids.

PARTNERING FOR WATER QUALITY

Exeter's downtown is high visibility and the perfect place to educate the public about stormwater runoff. The town will provide signs (shown here)



for businesses that support the stormwater program. We will also provide educational materials such as bookmarks, hard stock paper coasters, children's stickers, and flyers if businesses are interested. To receive these items, please fill out attached postcard and mail it back to us.

If you have any questions, please contact Phyllis Duffy at 603-778-0591, or via e-mail at pduffy@exeternh.org.

PLEASE
APPLY
STAMP

EXETER CLEAN WATER CAMPAIGN
C/O THE TOWN OF EXETER -
DEPARTMENT OF PUBLIC WORKS
10 FRONT STREET
EXETER, NH 03833

- **DON'T** pour chemicals down the sink or toilet, including prescription drugs. Safely store them and take them to the Household Hazardous Waste Collection.



- **DON'T** use septic system cleaners or additives containing acids or chemical solvents such as trichloroethylene.
- **DON'T** overload your septic system with solids by using a garbage disposal, unless the system is specifically designed for one.
- **DON'T** have an underground storage tank removed by someone who is not familiar with state guidelines for UST removal.



- **DON'T** buy more pesticides or hazardous chemicals than you need.
- **DON'T** over-use pesticides or household chemicals. More is **not** necessarily better.
- **DON'T** use fertilizers if heavy rains are anticipated as the nutrients will be flushed from the lawn into drains and low areas.
- **DON'T** apply fertilizers within 10 feet of catch basins, culverts, drainage ditches, wells, roadways & sidewalks, or 25 feet of rivers, streams & ponds.
- **DON'T** leave pet waste on the ground where it can be carried by stormwater to local streams.
- **DON'T** dispose of hazardous chemicals by pouring them down the drain or onto the ground.



Exeter's Wellhead Protection Program was funded in part by a grant from the NHEP, as authorized by the US EPA's National Estuary Program.

DO'S & DON'TS

To Protect Exeter's Drinking Water



- **DO** take leftover household chemicals to the annual Household Hazardous Waste Collection Day, held 1st Saturday in October.
- **DO** take care of your septic system. Inspect the septic tank every year and have it pumped out every 3 to 5 years.
- **DO** avoid damage to your leachfield & distribution lines by keeping vehicles, livestock & other heavy objects off of it.
- **DO** check underground fuel tanks (UST) frequently for leaks. Have an UST removed if more than 20 years old and replace with an above ground tank that has a concrete slab underneath it, a cover & a secondary containment.

- **DO** use drip pans large enough to contain motor vehicle or power equipment fluids being replaced or drained.
- **DO** fully drain oil over a drip pan or pail before disposal. Store & transport used oil filters in a covered leak-proof container until properly disposed. (Household Hazardous Waste Day)
- **DO** refuel or repair engines over an impervious surface such as a concrete floor or tarp.
- **DO** drain all fluids from motor vehicle parts before removing them from vehicle.
- **DO** keep absorbent materials such as rags, pads, speedee-dri, kitty litter, or other clay based products handy to the work area & clean up all spills as soon as they occur. Store all used absorbents immediately in a leak-proof container and dispose of properly.

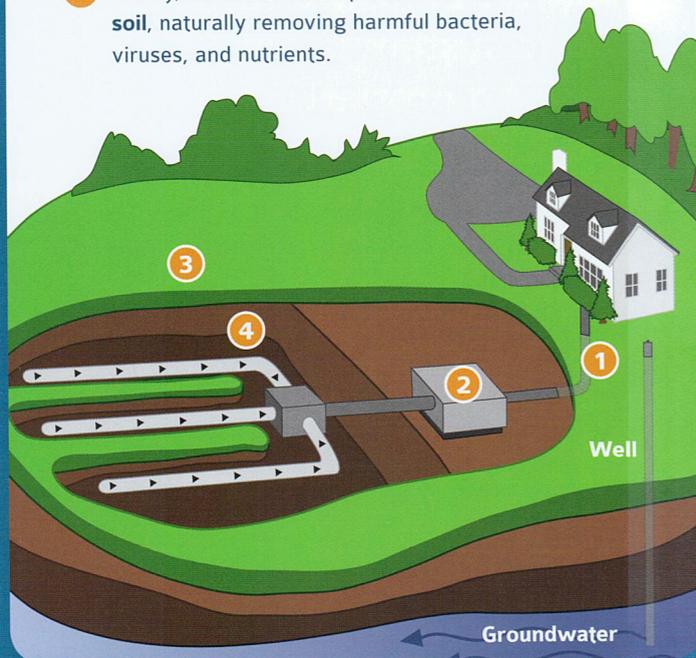


- **DO** test soil every two years to determine nutrient levels & pH before applying fertilizers.
- **DO** use slow release nitrogen sources of fertilizer.
- **DO** measure the area of your lawn to be fertilized to determine how much to use.
- **Do** calibrate or adjust spreader settings to match the recommended rate of fertilizers.
- **DO** use non-toxic & less-toxic alternatives to pesticides & household chemicals.
- **DO** follow package directions on pesticides, fertilizers, & other household chemicals.
- **DO** pick up pet waste!

How does a septic system work?

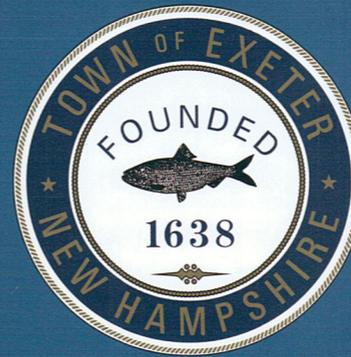
This is a simplified overview of how a septic system works.

- 1 All water runs out of your house from one main **drainage pipe** into a septic tank.
- 2 The **septic tank** is a buried, water-tight container usually made of concrete, fiberglass or polyethylene. Its job is to hold the wastewater long enough to allow solids to settle down to the bottom (forming sludge), while the oil and grease floats to the top (as scum). Compartments and a T-shaped outlet prevent the sludge and scum from leaving the tank and traveling into the drainfield area.
- 3 The liquid wastewater then exits the tank into the **drainfield**. If the drainfield is overloaded with too much liquid, it will flood, causing sewage to flow to the ground surface or create backups in toilets and sinks.
- 4 Finally, the wastewater percolates into the **soil**, naturally removing harmful bacteria, viruses, and nutrients.



SepticSmart Helps Protect Your Home and Family

If you have a septic system, it's extremely important to keep up with its proper care and maintenance. The U.S. Environmental Protection Agency's SepticSmart initiative helps ensure that we all know how to do our part to safeguard our community's health and protect the environment. It can also protect your family and keep you from spending thousands of dollars repairing or replacing a damaged system.



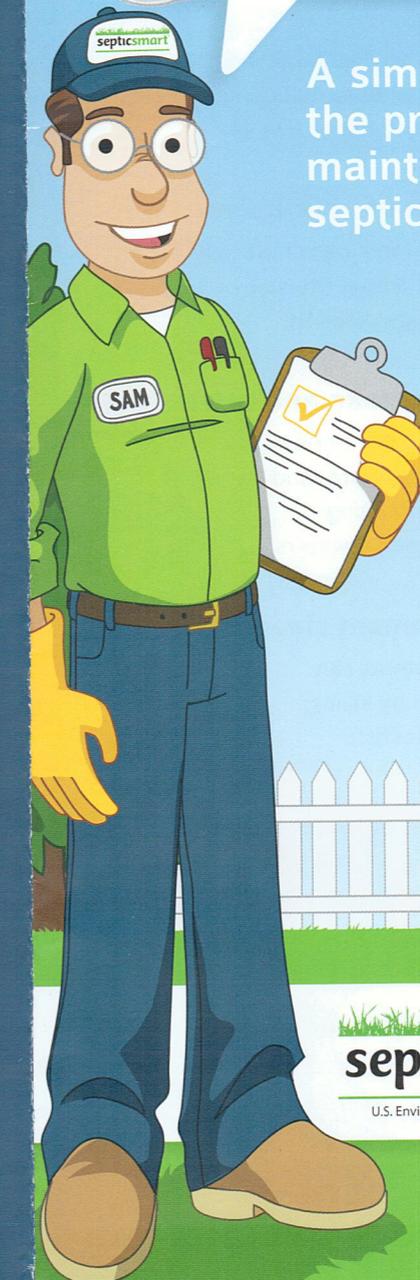
For more information on how you can be SepticSmart, please visit:
www.epa.gov/septicSMART



EPA-832-B-12-003
September 2012

Do your Part— Be SepticSmart!

A simple guide to the proper care and maintenance of your septic system.



septicSMART

U.S. Environmental Protection Agency

Why is it important to properly maintain my septic tank?

It saves you money.

Malfunctioning systems can cost \$3,000-\$7,000 to repair or replace compared to maintenance costs of about \$250-\$500 every three to five years.

It protects the value of your home.

Malfunctioning septic systems can drastically reduce property values, hamper the sale of your home, and even pose a legal liability.

It keeps your water clean and safe.

A properly maintained system helps keep your family's drinking water pure, and reduces the risk of contaminating community, local, and regional waters.

It keeps the environment clean.

Malfunctioning septic systems can harm the local ecosystem by killing native plants, fish, and shellfish.

Do I have a septic system? If so, how can I find it?

Here are a few tips to determine if you have a septic system and how to locate it.

You most likely have a system if:

- You are on well water.
- The water line coming into your house does not have a meter.
- Your neighbors have a septic system.

You can find your septic system by:

- Looking on the "as built" drawing for your home.
- Checking in your yard for lids or manhole covers.
- Using an inspector/pumper, who can also help you find exactly where the system is located.

What can I do to help maintain my system?

Protect it and Inspect it.

A typical septic system should be inspected at least every three years by a licensed contractor and your tank pumped as recommended by the inspector (generally every three to five years).

Think at the Sink.

- Your septic system contains a living collection of organisms that digest and treat waste. Pouring toxins down your drain can kill these organisms and harm your septic system.
- Oil-based paints, solvents, and large volumes of toxic cleaners should not enter your septic system. Even latex paint cleanup waste should be minimized.
- Eliminating the use of a garbage disposal can reduce the amount of fats, grease, and solids entering the septic tank and ultimately clogging the drainfield. Increased disposal use results in more frequent pumping.

Don't Overload the Commode.

A variety of household products can clog and potentially damage septic system components.

Do not flush:

- Feminine hygiene products
- Condoms
- Diapers
- Cigarette butts
- Coffee grounds
- Cat litter

For a complete list, visit www.epa.gov/septicmart.

Don't Strain your Drain.

It's simple. The less water you use, the less water that enters the septic tank, which decreases its workload. Here are a few easy ways to save water:

- Run dishwasher and washing machine only when full.
- Repair leaky toilets and pipes.
- Use high-efficiency toilets and faucets.

For more information on how you can save water, visit EPA's WaterSense program, www.epa.gov/watersense.

Shield your Field.

It's equally important to protect your drainfield.

- Do not park or drive on your drainfield.
- Plant trees the appropriate distance from the drainfield to keep roots from growing into the system.
- Keep roof drains, sump pumps and other rainwater drainage systems away from the area. Excess water slows down or stops the treatment process.

How do I know if my septic system is not working properly?

Mind the Signs!

Here are a few signs of septic system malfunction. If you discover any of these warning signs, call a licensed septic tank contractor immediately. One call could save you thousands of dollars.

- Wastewater backing up into household drains.
- A strong odor around the septic tank and drainfield.
- Bright green, spongy grass appearing on the drainfield, even during dry weather.



What is a Septic System?

A septic system, also referred to as a private, on-site waste disposal system, receives waste water and solids from a buildings plumbing facilities (bathrooms, kitchens, shower, laundry), treats and then disposes of the effluent from this waste by permitting it to absorb into the soils at the property.

Did you know that maintaining your septic system protects your investment in your home?

Components

A typical septic system has four main components: a pipe from the home, a septic tank, a drainfield, and the soil.

Tip

To prevent buildup, sludge and floating scum need to be removed through periodic pumping of the septic tank. Regular inspections and pumping are the best and cheapest way to keep your septic system in good working order.

When should I have an inspection done? Your septic system should be inspected on a regular basis. It is recommended that the septic system be inspected every 1 to 3 years and tank cleaned out every 3 to 5 years. It is always an opportune time and recommended to inspect your system when it is being cleaned out.

Where does the wastewater go when it leaves the tank? After the septic tank the clarified wastewater (effluent) will flow into the soil absorption system. The most common type of soil absorption area is called the drainfield or leachfield, but seepage beds are also used.

Not in My Septic System!

X - Cloggers - Diapers, cat litter, cigarette filters, coffee grounds, grease, feminine hygiene products, baby wipes, etc.

X- Killers - Household chemicals, gasoline, oil, pesticides, antifreeze, paint, etc.

****Garbage disposals**

Eliminating the use of a garbage disposal can reduce the amount of grease and solids entering the septic tank and possibly clogging the drainfield.

Exeter DPW www.town.exeter.nh.us/dpw/stormwater

Septic Systems and Their Maintenance



A properly functioning septic system requires regular maintenance

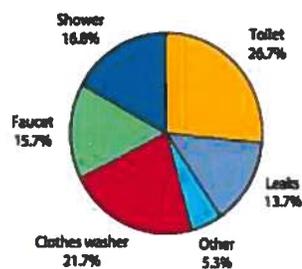
Maintenance is the single most important consideration in making sure a septic system will work well over a long period of time.

What you should do ...

Top Four Things You Can Do to Protect Your Septic System—

1. Regularly have your system inspected and tank pumped as necessary (see recommendation).
2. Use water efficiently.
3. Do not dispose of household hazardous chemicals in sinks or toilets.
4. Care for your drainfield.

How Much Water Do We Use?



Source: American Water Works Association Research Foundation, "Consider the End Users of Water," 1999